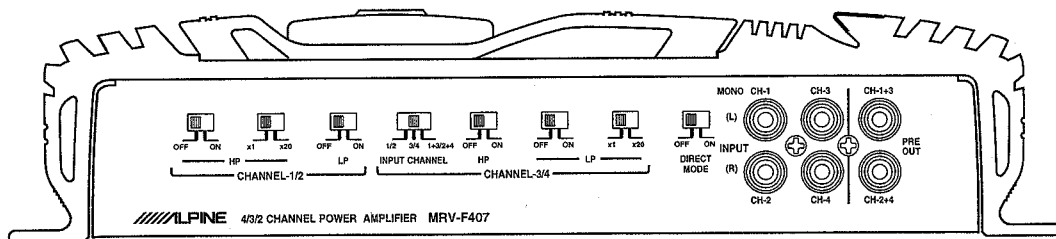


ALPINE[®] SERVICE MANUAL

4/3/2 Channel Power Amplifier



サービス費用区分	B
技術資料No.	PM-78-O

MRV-F407

Contents

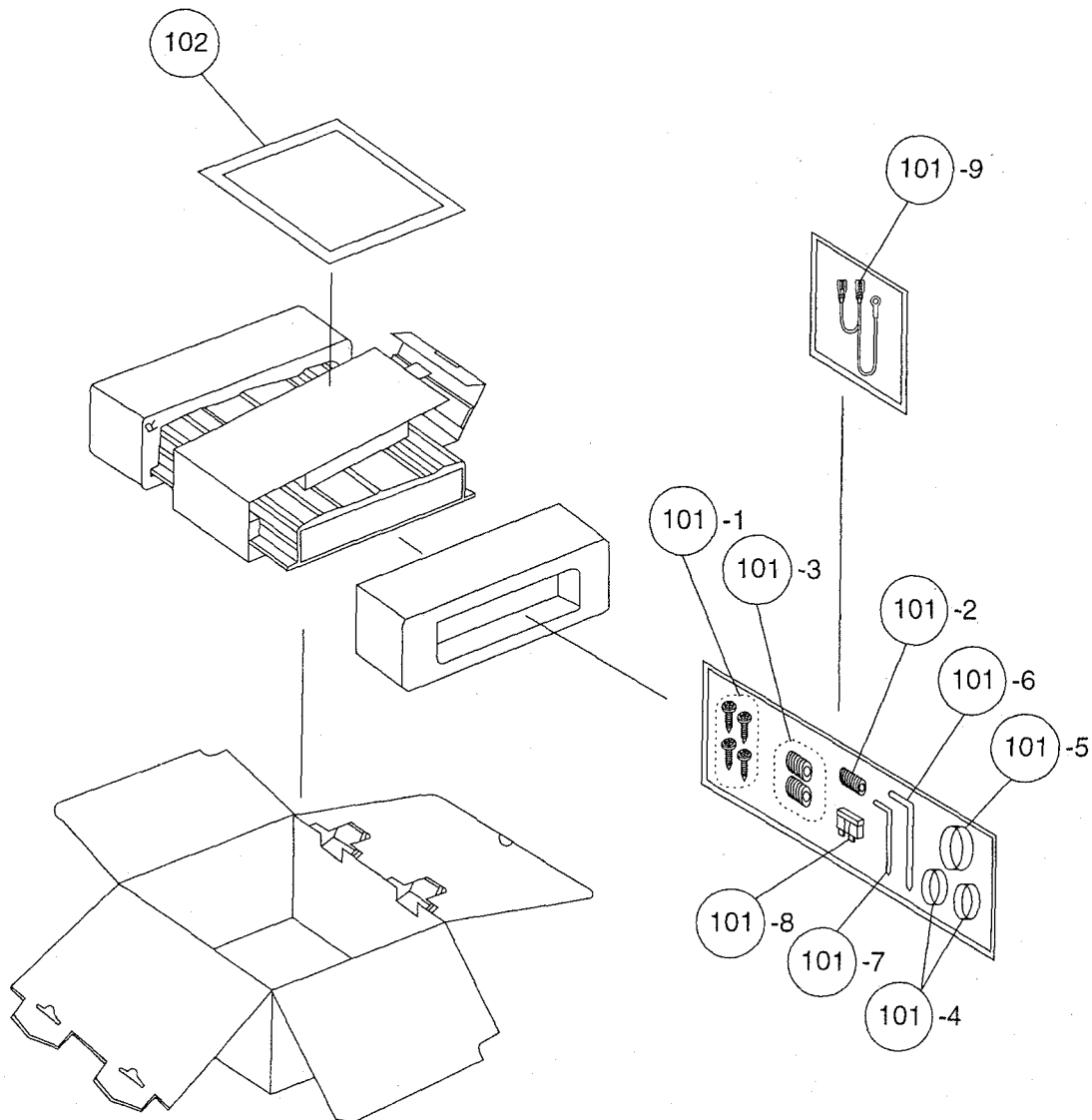
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Packing Assembly Parts List

Symbol No.	Part No.	Description	Symbol No.	Part No.	Description
101-1	03E11447S01	Screw, TPG (M4X14)	101-9	01E29401S01	Assy., Remote Wire
101-2	03E29353S01	Screw (M4X10)	○ 102	68P11199Y97	Owner's Manual
101-3	03E29533S01	Screw (M5X6)	△ 102-1	68P11199Y98	Owner's Manual (ENGLISH/FRANCAIS/ESPANOL)
101-4	75E22440S01	Housing Rubber-C	△ 102-2	68P11199Y99	Owner's Manual (DEUTSCH/ITALIANO/SVENSKA)
101-5	75E29586S01	Housing Rubber-E	□ 102	68P20877Y01	Owner's Manual
101-6	01E29587S01	Wrench (2.5X2.9mm)			
101-7	01E28659S01	Wrench (2X2.3mm)			
101-8	65E29539S01	Fuse, Auto 40A (For Battery Line)			

NOTE: ○: For North American Model Only, △: For General Foreign Model Only,
 □: For Japanese Model Only, Others: Common.

Packing Method View



Specifications

T.H.D. <DIRECT MODE OFF/BATTERY NORMAL>	
(Stereo, 20Hz/1kHz/20kHz)	60W/ch, 4ohm-4channel, 14.4V, L.P.F.-80kHz : 0.2%
	40W/ch, 4ohm-4channel, 12V, L.P.F.-80kHz : 0.2%
	80W/ch, 2ohm-4channel, 14.4V, L.P.F.-80kHz : 0.8%
	50W/ch, 2ohm-4channel, 12V, L.P.F.-80kHz : 0.8%
(BTL, RCA INPUT CH-1/CH-3, 20Hz/1kHz/20kHz)	160W/ch, 4ohm-2channel, 14.4V, L.P.F.-80kHz : 0.8%
	100W/ch, 4ohm-2channel, 12V, L.P.F.-80kHz : 0.8%
Power Output <DIRECT MODE OFF/BATTERY NORMAL>	
(Stereo, 20Hz/1kHz/20kHz)	4ohm-4channel, 0.08% T.H.D., 14.4V, L.P.F.-80kHz : 50W
	4ohm-4channel, 0.08% T.H.D., 12V, L.P.F.-80kHz : 30W
	2ohm-4channel, 0.3% T.H.D., 14.4V, L.P.F.-80kHz : 60W
	2ohm-4channel, 0.3% T.H.D., 12V, L.P.F.-80kHz : 35W
(BTL, RCA INPUT CH-1/CH-3, 20Hz/1kHz/20kHz)	4ohm-2channel, 0.3% T.H.D., 14.4V, L.P.F.-80kHz : 130W
	4ohm-2channel, 0.3% T.H.D., 12V, L.P.F.-80kHz : 70W
<DIRECT MODE OFF/BATTERY DIRECT>	
(BTL, RCA INPUT CH-1/CH-3, 1kHz)	4ohm-2channel, 0.3% T.H.D., 14.4V, L.P.F.-80kHz : 140W
S/N Ratio (Ref. Output 60W/4ohm, Input shorted)	100dB
Input Sensitivity (60W Output)	GAIN-VR (NORM) : RCA/DIRECT MODE : 1V±3dB
	GAIN-VR (MAX) : 0.25V±3dB
	GAIN-VR (MIN) : 5V±3dB
Input Impedance	RCA : 22kohm±10%
	DIRECT MODE : 13kohm±10%
Frequency Response (0±1dB, Ref. 1kHz)	20Hz~50kHz
Current Drain	No Signal : 1.5A
	4ohm-4channel, 10% T.H.D. : 50A
	4ohm-2channel, BTL, 10% T.H.D. : 75A
Residual Noise (Input Shorted, 4ohm-4channel)	VR Center, MIN. : 3mV
	VR MAX. : 6mV
Channel Separation (Input Shorted, 1kHz, 60W-4channel)	55dB
Remote on Voltage	6.5+1, -1.5V
Remote Current Drain	1.3±0.5mA
Back Up Current Drain	1.2mA
Fuse Requirement	40A (For Battery Line)
Power Source	DC14.4V (11~16V)
Dimensions (W×H×D)	260×60×330mm
Weight	5.27kg

NOTE : Due to Continuing product improvement, specifications and designs are subject to change without notice.

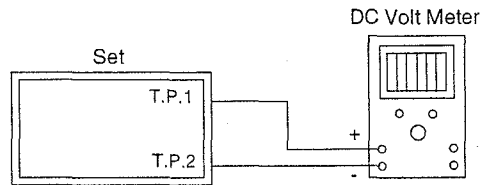
Adjustment Procedures

1. Power Supply Voltage Adjustment

電源電圧調整

(1) Connection

接続



BATTERY : DC14.4V
 BATTERY DIRECT : OPEN
 REMOTE : DC6.5+1, -1.5V
 No Signal Input

Figure 1
1図

(2) Adjustment Procedures

調整方法

Adjust VR701 so that Voltage between T.P.1 and T.P.2 reaches $60 \pm 1V$.

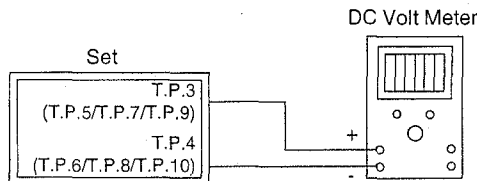
T.P.1とT.P.2との間の電圧が $60 \pm 1V$ になる様にVR701で調整する。

2. Idling Adjustment

アイドリング調整

(1) Connection

接続



BATTERY : DC14.4V
 BATTERY DIRECT : OPEN
 REMOTE : DC6.5+1, -1.5V
 No Signal Input

Figure 2
2図

(2) Adjustment Procedures

調整方法

- ① Adjust VR401 so that Voltage between T.P.3 and T.P.4 reaches $1 \pm 0.5mV$.

T.P.3とT.P.4との間の電圧が $1 \pm 0.5mV$ になる様にVR401で調整する。

- ② Adjust VR402 so that Voltage between T.P.5 and T.P.6 reaches $1 \pm 0.5mV$.

T.P.5とT.P.6との間の電圧が $1 \pm 0.5mV$ になる様にVR402で調整する。

- ③ Adjust VR403 so that Voltage between T.P.7 and T.P.8 reaches $1 \pm 0.5mV$.

T.P.7とT.P.8との間の電圧が $1 \pm 0.5mV$ になる様にVR403で調整する。

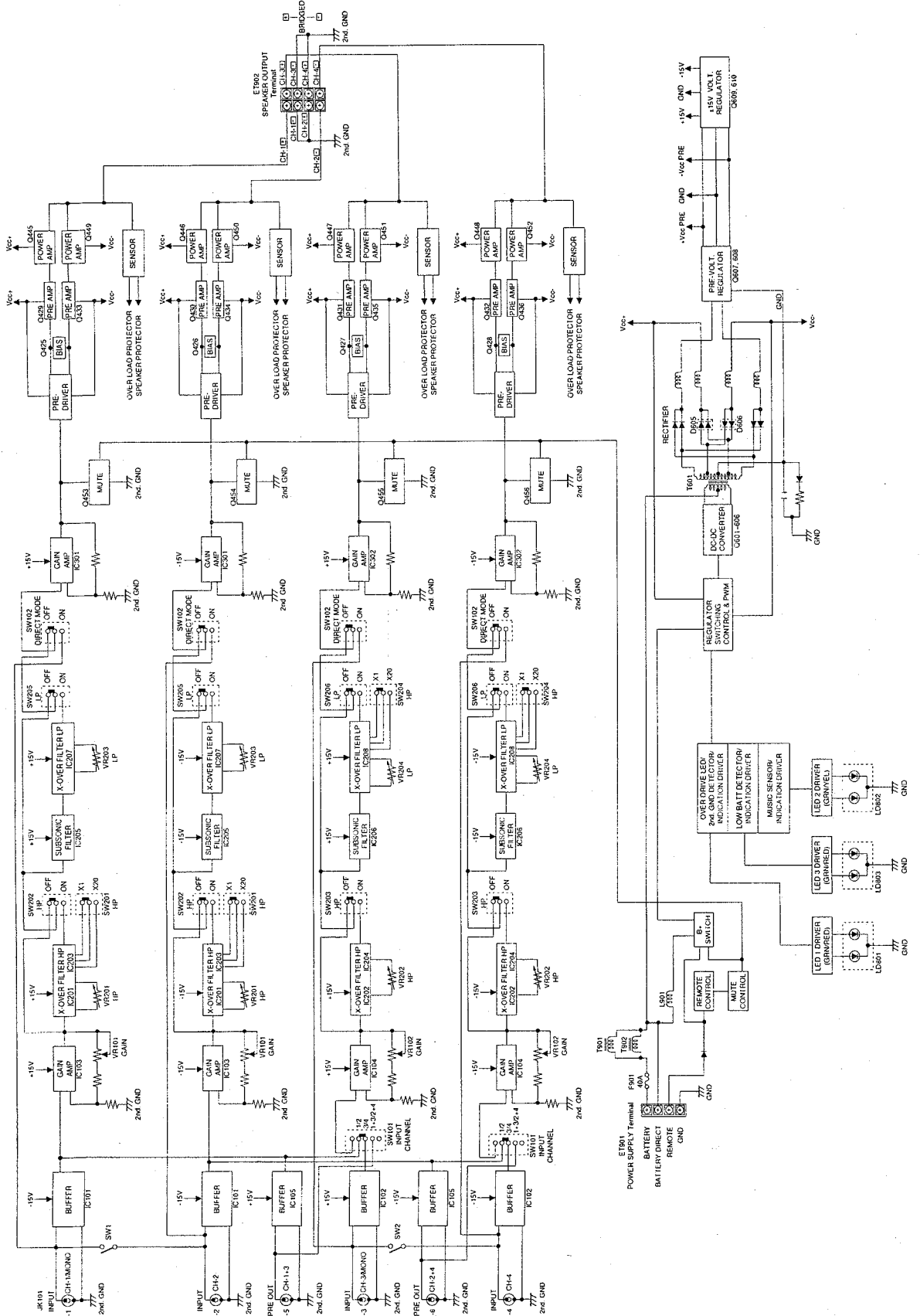
- ④ Adjust VR404 so that Voltage between T.P.9 and T.P.10 reaches $1 \pm 0.5mV$.

T.P.9とT.P.10との間の電圧が $1 \pm 0.5mV$ になる様にVR404で調整する。

NOTE : For the Adjustment Parts and Test Points, refer to the Parts Layout on P.W. Boards and Wiring Diagram.

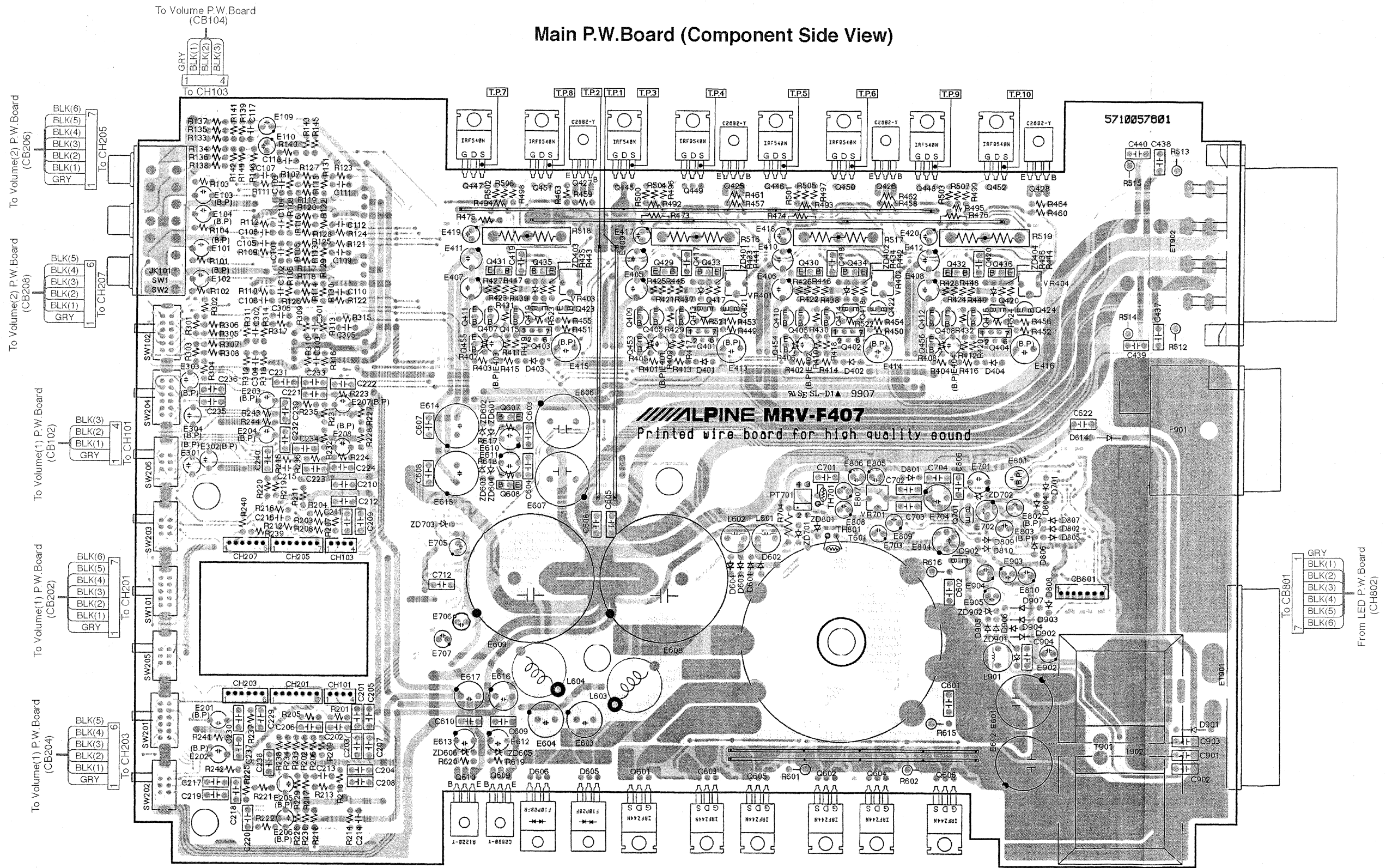
注記：調整部品及びテストポイントの詳細については、「Parts Layout on P.W. Boards and Wiring Diagram」を参照願います。

Block Diagram



Parts Layout on P.W. Boards and Wiring Diagram (1/3)

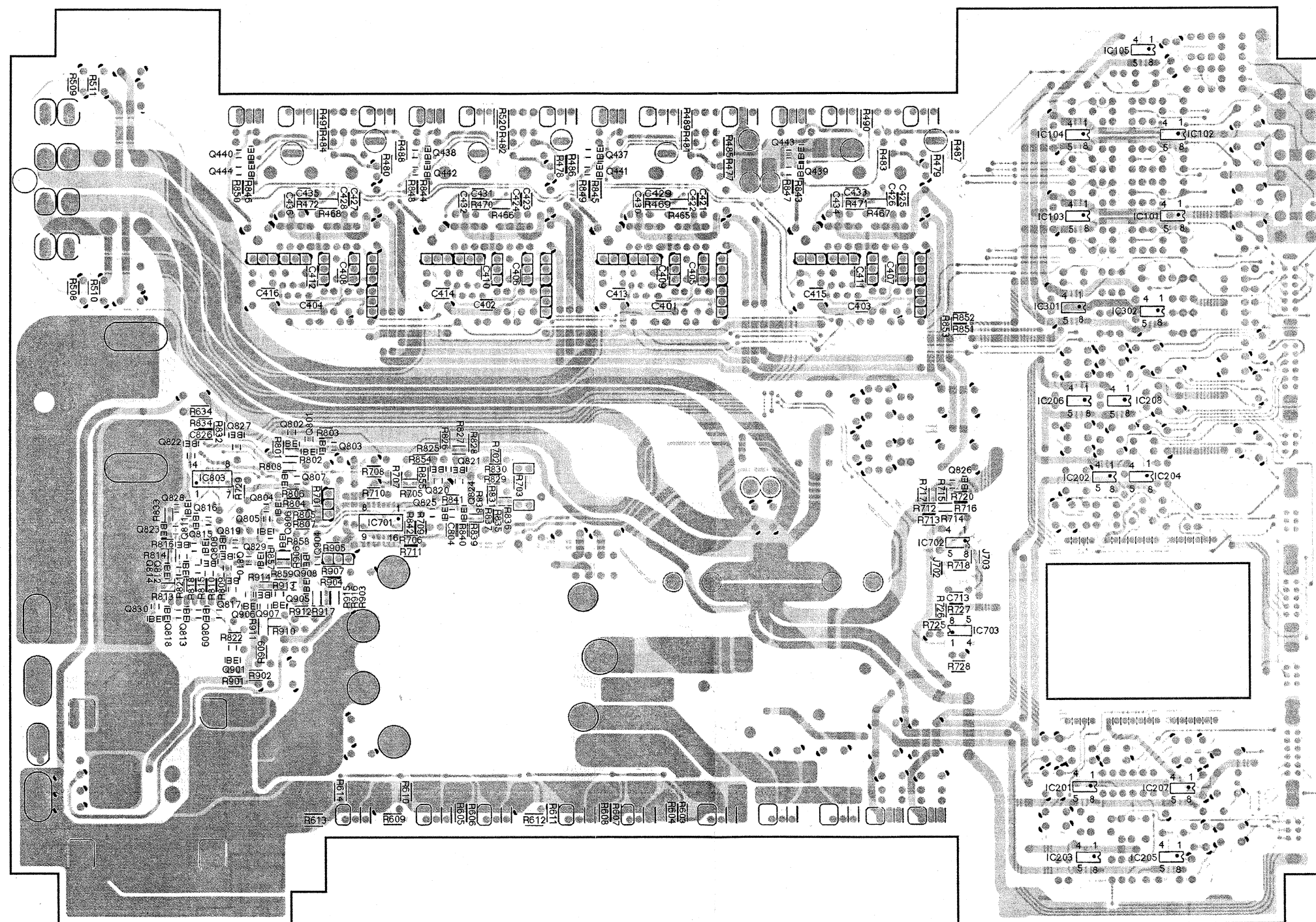
Main P.W.Board (Component Side View)



Gray Color Pattern : Component Side Pattern
 Blue Color Pattern : Foil Side Pattern

Parts Layout on P.W. Boards and Wiring Diagram (2/3)

Main P.W.Board (Foil Side View)

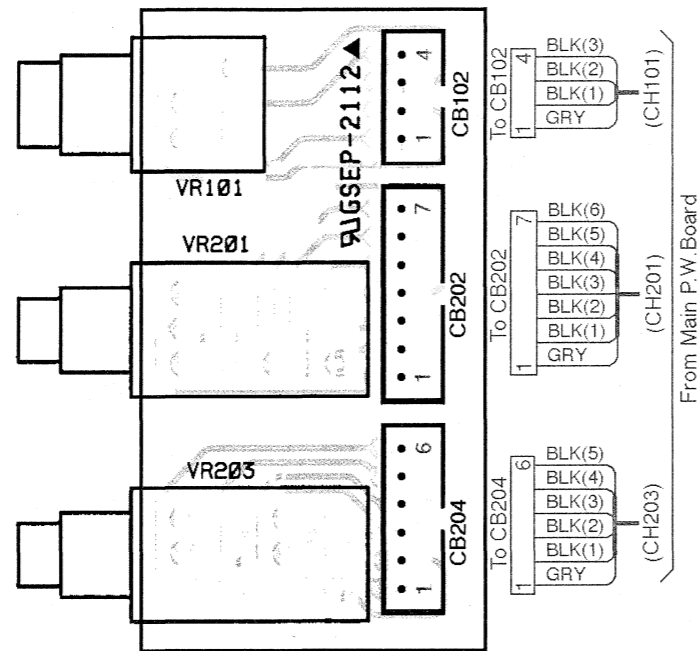


Gray Color Pattern : Component Side Pattern
 Blue Color Pattern : Foil Side Pattern

Parts Layout on P.W. Boards and Wiring Diagram (3/3)

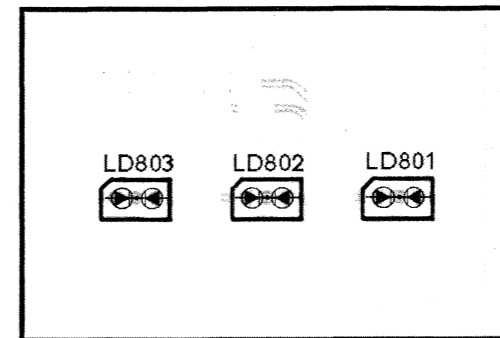
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**Volume(1) P.W.Board
(Component Side View)**



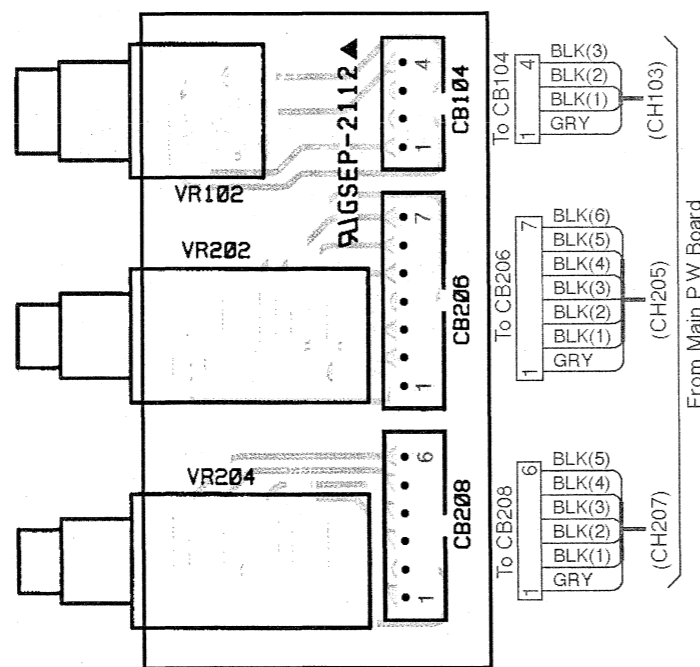
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**LED P.W.Board
(Component Side View)**

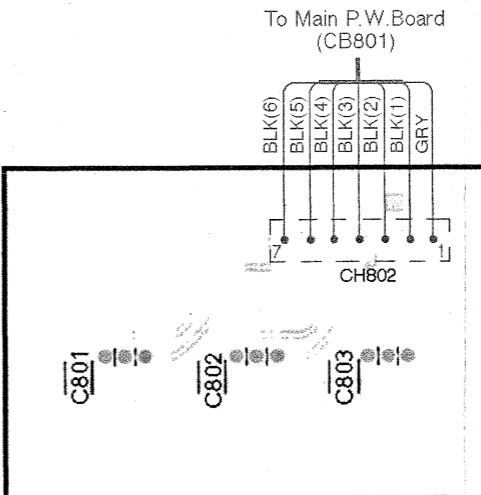


3

**Volume(2) P.W.Board
(Component Side View)**



4



**LED P.W.Board
(Foil Side View)**

5

Blue Color Pattern : Foil Side Pattern

A

B - 11 -

C

D

E

F - 12 -

G

Schematic Diagram (1/4)

1

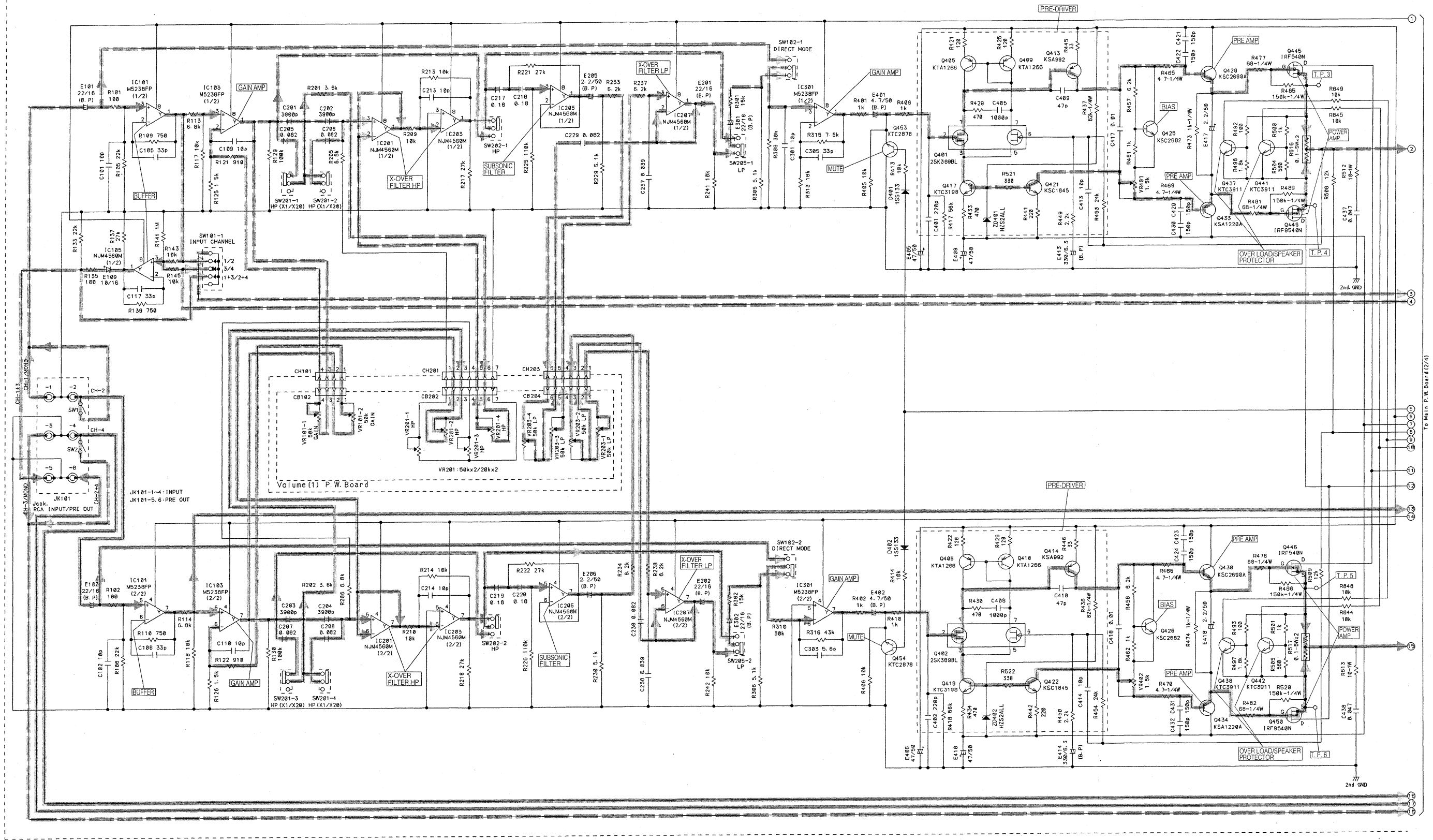
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3

4

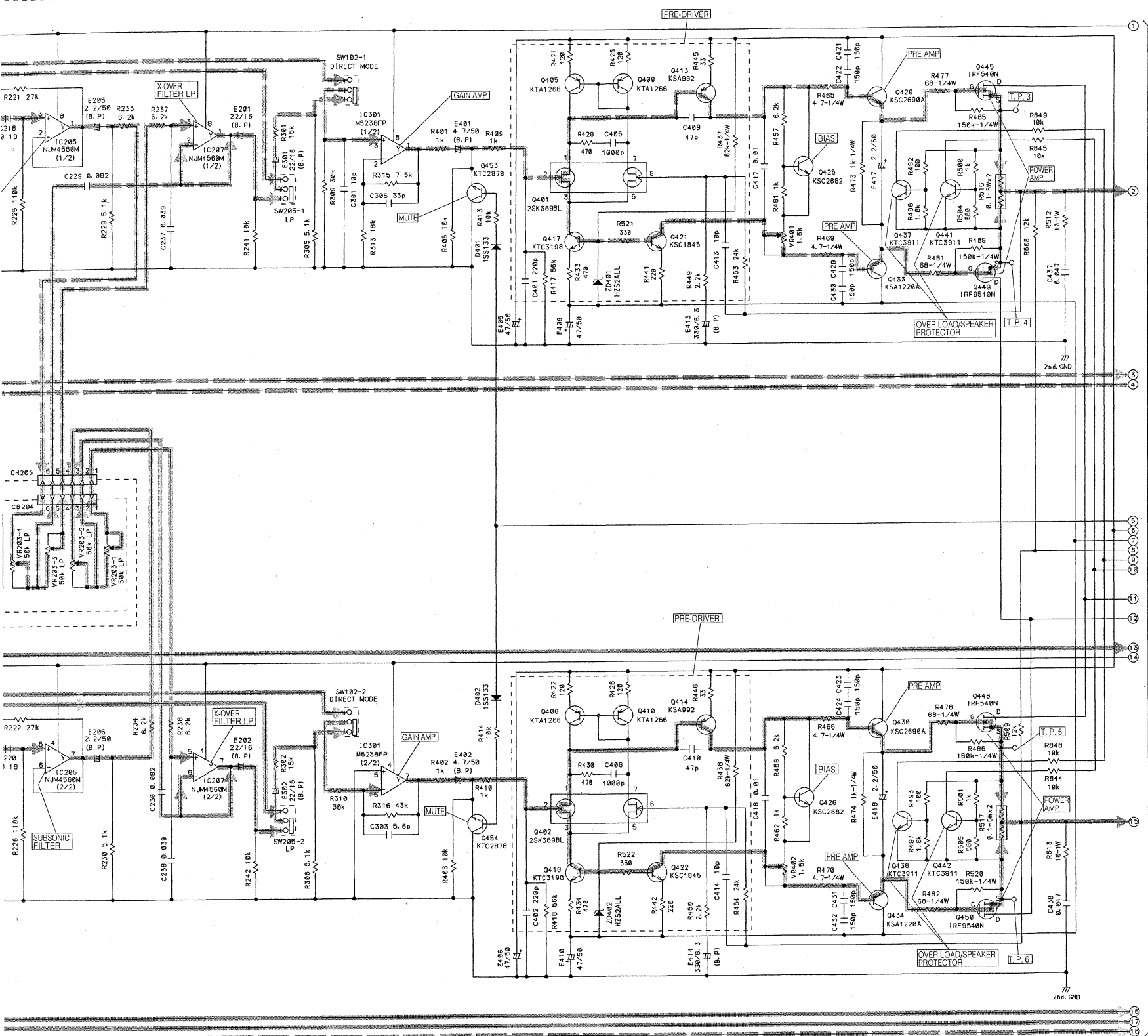
5

Main P.W. Board (1/4)



A | B - 13 - | C | D | E | F - 14 - | G | H |

TO MAIN P.W. BOARD (1/2, 4)



IC101	IC103	IC105	IC201	IC203	IC205	IC207	IC301
1 3mV	1 37mV	1 2.7mV	1 1mV	1 1.7mV	1 5mV	1 1.2mV	1 1.9mV
2 3mV	2 5.4mV	2 2.2mV	2 1mV	2 1mV	2 5.1mV	2 1.2mV	2 5.3mV
3 1mV	3 2mV	3 2.1mV	3 1.9mV	3 1mV	3 4.2mV	3 1.4mV	3 1.6mV
4 -15V	4 -15V	4 -15V	4 -15V	4 -15V	4 -15V	4 -15V	4 -15V
5 1mV	5 1.5mV	5 2.8mV	5 0.8mV	5 1.5mV	5 1mV	5 1.5mV	5 1.5mV
6 2.6mV	6 4.7mV	6 3.1mV	6 1mV	6 1mV	6 1mV	6 1.7mV	6 2mV
7 2.6mV	7 35mV	7 3.3mV	7 1mV	7 5.4mV	7 1mV	7 1.7mV	7 2mV
8 15.2V	8 15.2V	8 15.2V	8 15.2V	8 15.2V	8 15.2V	8 15.2V	8 15.2V

	G	D	S
Q445	3.5V	29.8V	4.2mV
Q446	3.4V	29.8V	4.4mV
Q449	-3.6V	-30V	5.5mV
Q450	-3.5V	-30V	5.4mV

	1	2	3	4	5	6	7
Q401	32.4V	1.3mV	0.38V	NC	0.38V	4.6mV	32.4V
Q402	32.4V	1.5mV	0.4V	NC	0.4V	5.4mV	32.4V

	E	C	B		E	C	B		E	C	B
Q405	32.6V	32.4V	32.3V	Q421	-32V	-4.2V	-31V	Q437	5.4mV	29.7V	8.1mV
Q406	32.5V	32.4V	32.3V	Q422	-32V	-4.3V	-31V	Q438	5.3mV	29.7V	8.3mV
Q409	33V	32.4V	32.3V	Q425	-0.5V	4.25V	97mV	Q441	5.5mV	29.7V	8.2mV
Q410	32.8V	32.3V	32.3V	Q426	-0.5V	4.23V	95mV	Q442	5.4mV	29.7V	8.4mV
Q413	33V	4.22V	32.4V	Q429	3.7V	33.2V	4.22V	Q453	1.7mV	2.2mV	-0.5V
Q414	33V	4.25V	32.4V	Q430	3.8V	33.2V	4.25V	Q454	1.7mV	2.2mV	-0.5V
Q417	-32V	0.38V	-31V	Q433	-3.8V	-33V	-4.2V				
Q418	-32V	0.4V	-31V	Q434	-3.7V	-33V	-4.3V				

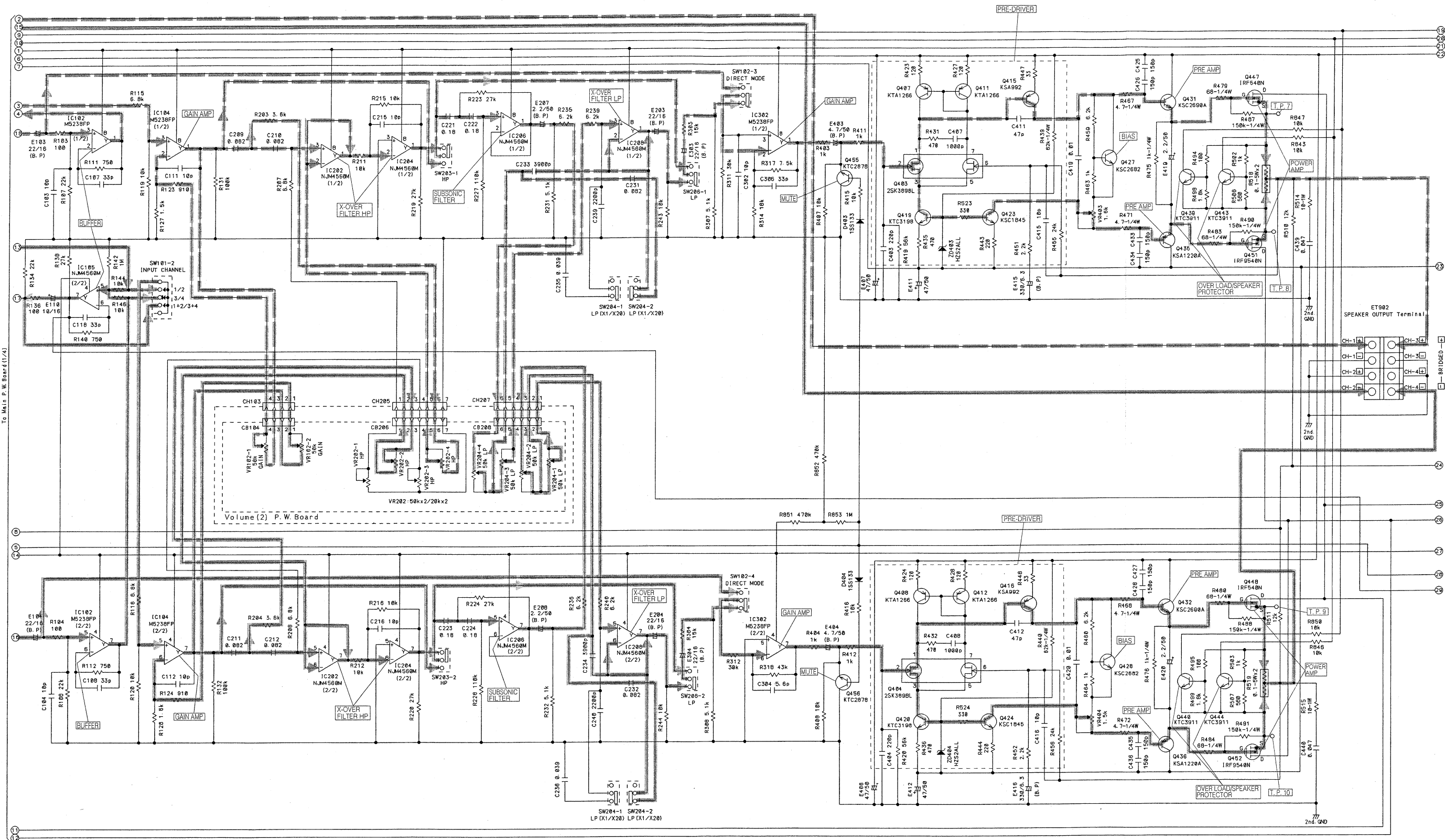
[Measuring Conditions]

- Power Supply Voltage : DC14.4V
- Measuring Meter : Digital Multi Voltmeter
- Measuring Point Reference : Between Ground
- Measuring Conditions : No Signal Input

NOTE:
 1. All resistance values are in ohms. K = 1,000
 2. All capacitance values are in microfarads. P = $\frac{1}{1,000,000}$

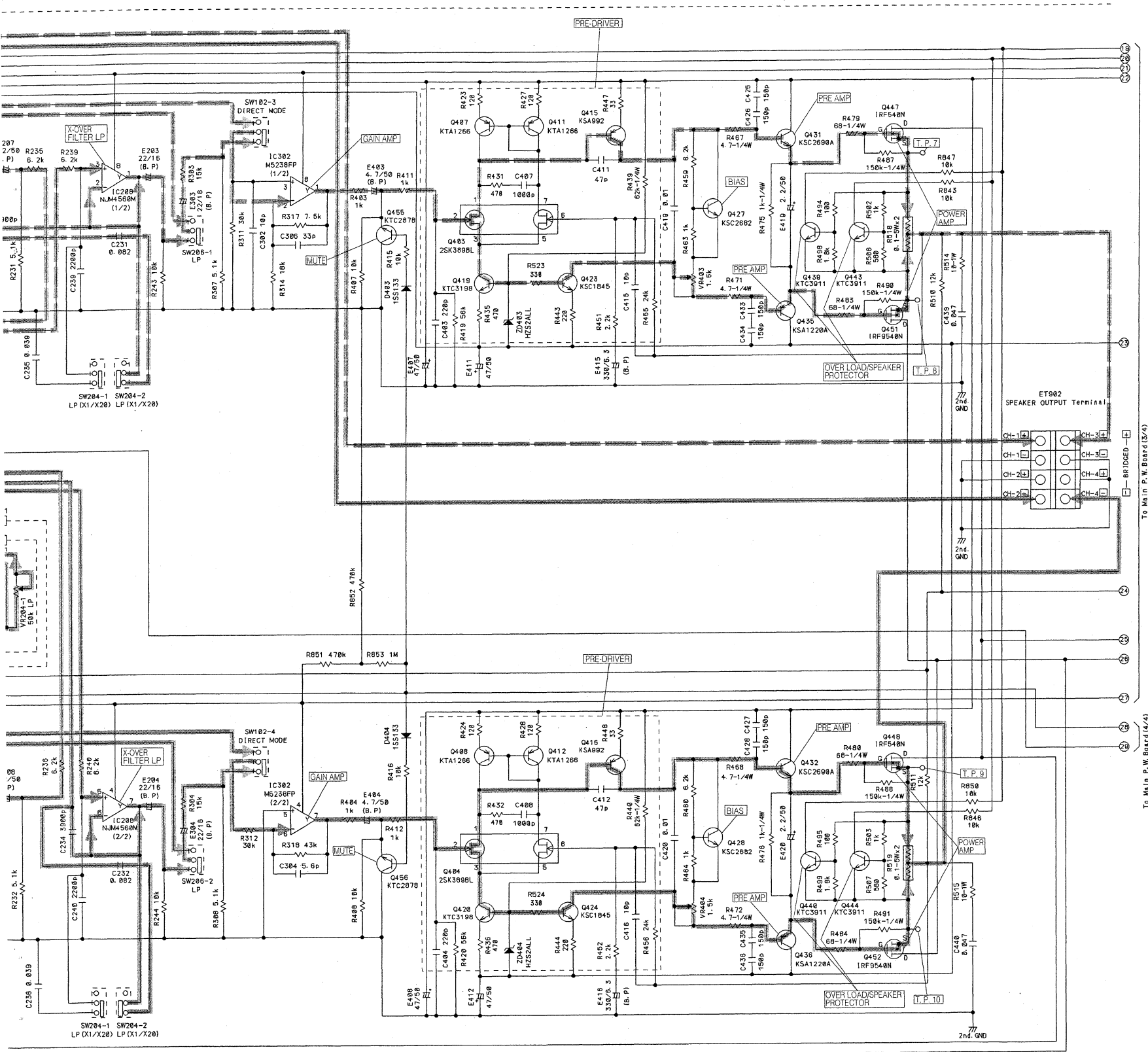
Schematic Diagram (2/4)

Main P. W. Board (2/4)



1
2
3
4
5

A | B -16- | C | D | E | F | G | H



IC102	IC104	IC202	IC204	IC206	IC208	IC302
1 1.5mV	1 31mV	1 0.9mV	1 2.8mV	1 5mV	1 0.8mV	1 0.7mV
2 1.5mV	2 4.6mV	2 0.9mV	2 1.4mV	2 5mV	2 0.4mV	2 0.8mV
3 1mV	3 1mV	3 0.8mV	3 1.5mV	3 4.3mV	3 0.8mV	3 1.3mV
4 -15V	4 -15V	4 -15V	4 -15V	4 -15V	4 -15V	4 -15V
5 1mV	5 1.4mV	5 0.9mV	5 1.7mV	5 4mV	5 0.7mV	5 1.5mV
6 2.7mV	6 3.9mV	6 1mV	6 0.8mV	6 4.5mV	6 1mV	6 0.6mV
7 2.6mV	7 27mV	7 1mV	7 1.5mV	7 4.5mV	7 1.2mV	7 0.6mV
8 15.2V	8 15.2V	8 15.2V	8 15.2V	8 15.2V	8 15.2V	8 15.2V

	G	D	S
Q447	3.5V	29.8V	4.3mV
Q448	3.5V	29.8V	4.2mV
Q451	-3.6V	-30V	5.3mV
Q452	-3.5V	-30V	5.4mV

	1	2	3	4	5	6	7
Q403	32.4V	1.7mV	0.38V	NC	0.38V	4.2mV	32.4V
Q404	32.4V	1.4mV	0.39V	NC	0.39V	4.3mV	32.4V

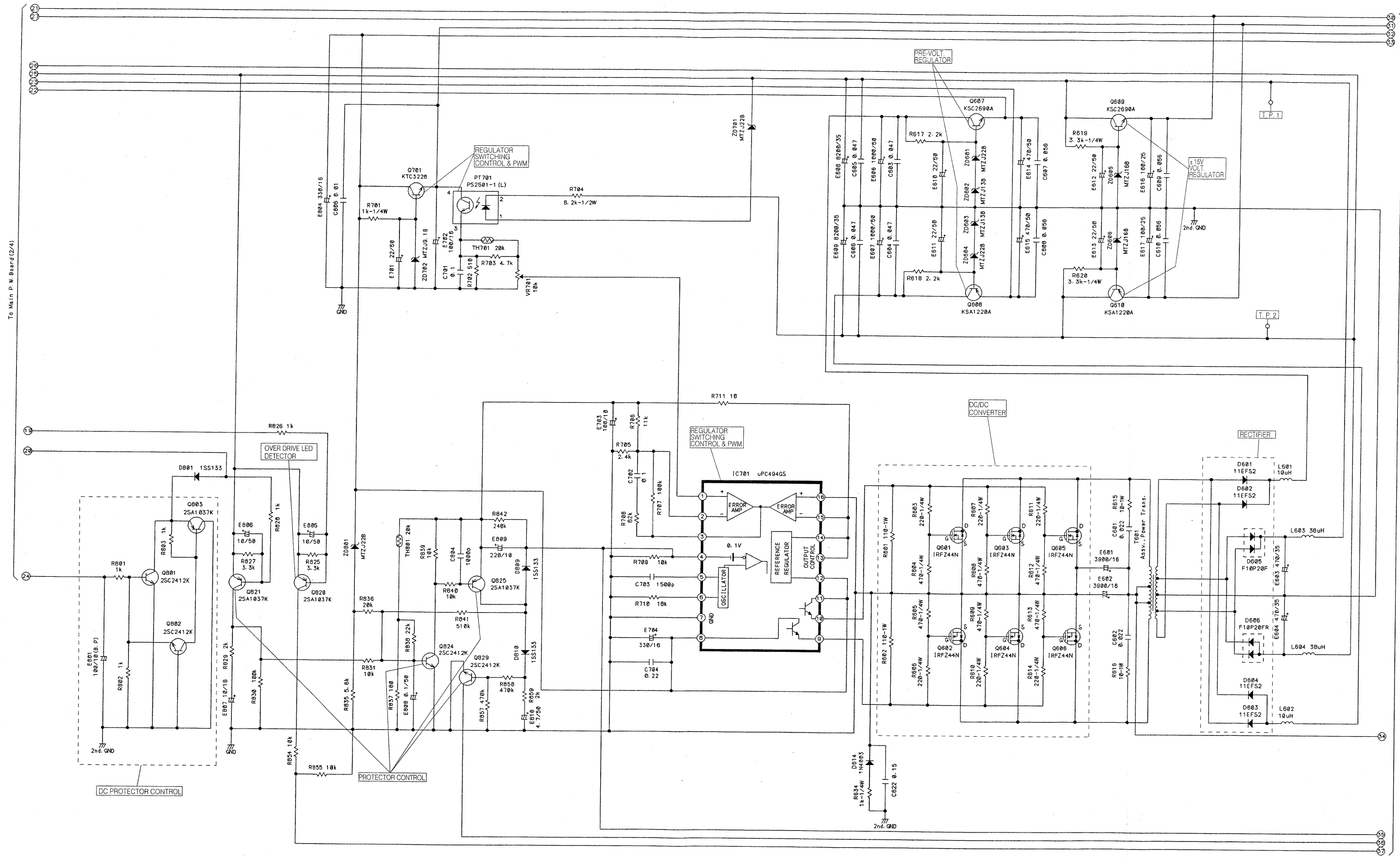
	E	C	B		E	C	B		E	C	B
Q407	32.6V	32.4V	32.3V	Q423	-32V	-4.4V	-31V	Q439	5.5mV	29.7V	8.2mV
Q408	32.6V	32.4V	32.3V	Q424	-32V	-4.3V	-31V	Q440	5.4mV	29.7V	8.4mV
Q411	32.9V	32.4V	32.3V	Q427	-0.5V	4.23V	95mV	Q443	5.4mV	29.7V	8.3mV
Q412	33V	32.5V	32.3V	Q428	-0.5V	4.25V	95mV	Q444	5.3mV	29.7V	8.2mV
Q415	33V	4.23V	32.4V	Q431	3.7V	33.2V	4.23V	Q455	1.7mV	2.2mV	-0.5V
Q416	33V	4.25V	32.4V	Q432	3.7V	33.2V	4.25V	Q456	1.7mV	2.2mV	-0.5V
Q419	-32V	0.39V	-31V	Q435	-3.8V	-33V	-4.4V				
Q420	-32V	0.38V	-31V	Q436	-3.7V	-33V	-4.3V				

- [Measuring Conditions]
- Power Supply Voltage : DC14.4V
 - Measuring Meter : Digital Multi Voltmeter
 - Measuring Point Reference : Between Ground
 - Measuring Conditions : No Signal Input

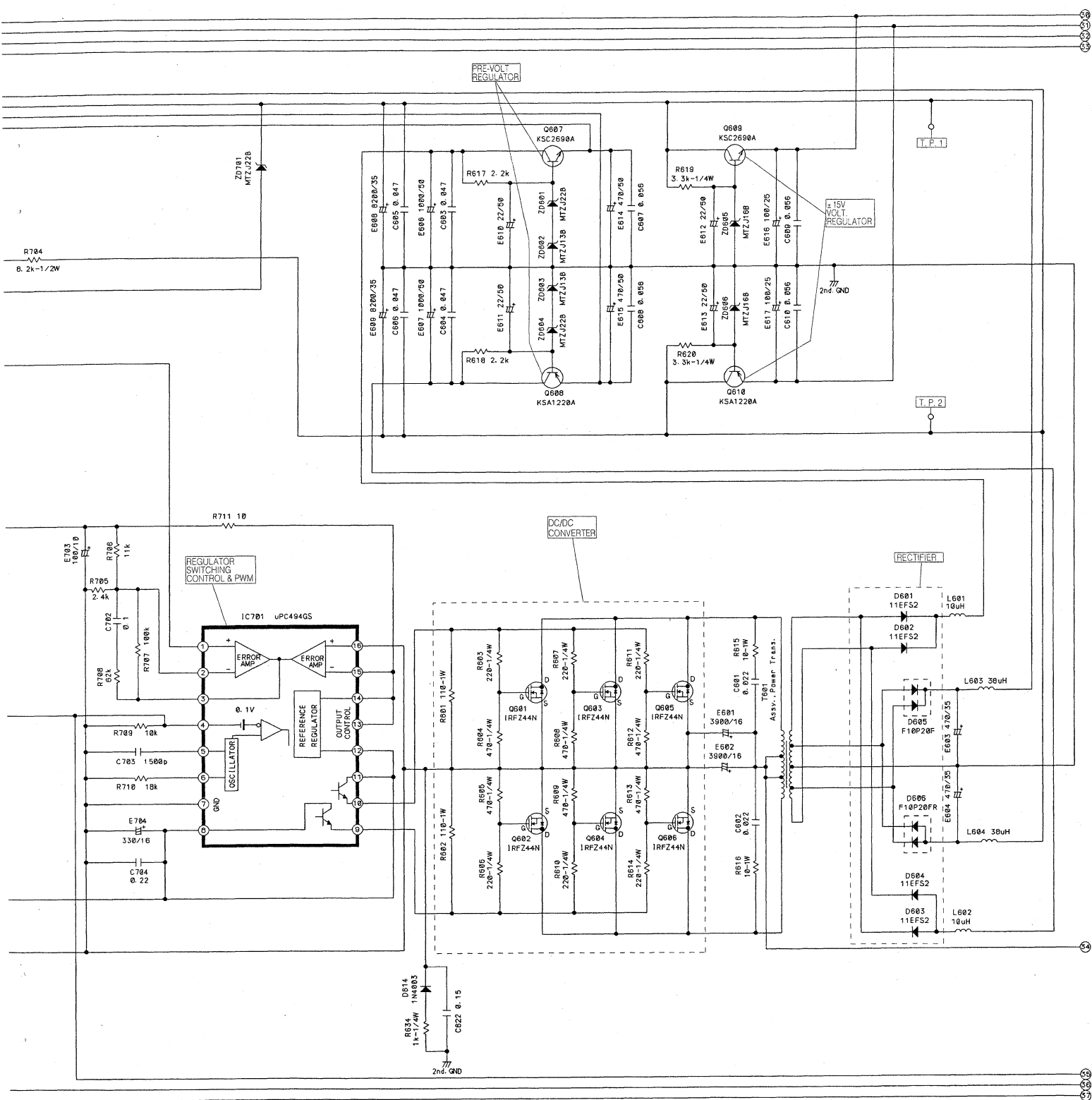
NOTE:
 1. All resistance values are in ohms. K = 1,000
 2. All capacitance values are in microfarads. P = 1,000,000

Schematic Diagram (3/4)

Main P.W. Board (3/4)



A | B - 19 - | C | D | E | F - 20 - | G | H |



IC701

1, 2	0.95V	8	14.2V
3	3.77V	9, 10	0.66V
4	212mV	11, 12	14.2V
5	1.67V	13-15	5V
6	3.75V	16	2mV
7	2mV		

	G	D	S
Q601	0.66V	14.3V	1.1mV
Q602	0.66V	14.3V	1.1mV
Q603	0.66V	14.3V	1.1mV
Q604	0.66V	14.3V	1.1mV
Q605	0.66V	14.3V	1.1mV
Q606	0.66V	14.3V	1.1mV

	E	C	B		E	C	B
Q607	33.2V	33.7V	32.6V	Q803	29.5V	0V	29.5V
Q608	-33V	-33.5V	-32.4V	Q820	29.7V	2mV	29.7V
Q609	15.2V	29.7V	15.8V	Q821	29.7V	2mV	29.7V
Q610	-15V	-30V	-15.6V	Q824	1.4mV	5V	35mV
Q701	8.1V	14.3V	8.8V	Q825	5V	55mV	5V
Q801	0V	29.5V	0V	Q829	2mV	14.2V	5mV
Q802	0V	29.5V	0V				

[Measuring Conditions]

- Power Supply Voltage : DC14.4V
- Measuring Meter : Digital Multi Voltmeter
- Measuring Point Reference : Between Ground
- Measuring Conditions : No Signal Input

NOTE:

1. All resistance values are in ohms. K = 1,000
2. All capacitance values are in microfarads. P = $\frac{1}{1,000,000}$

Schematic Diagram (4/4)

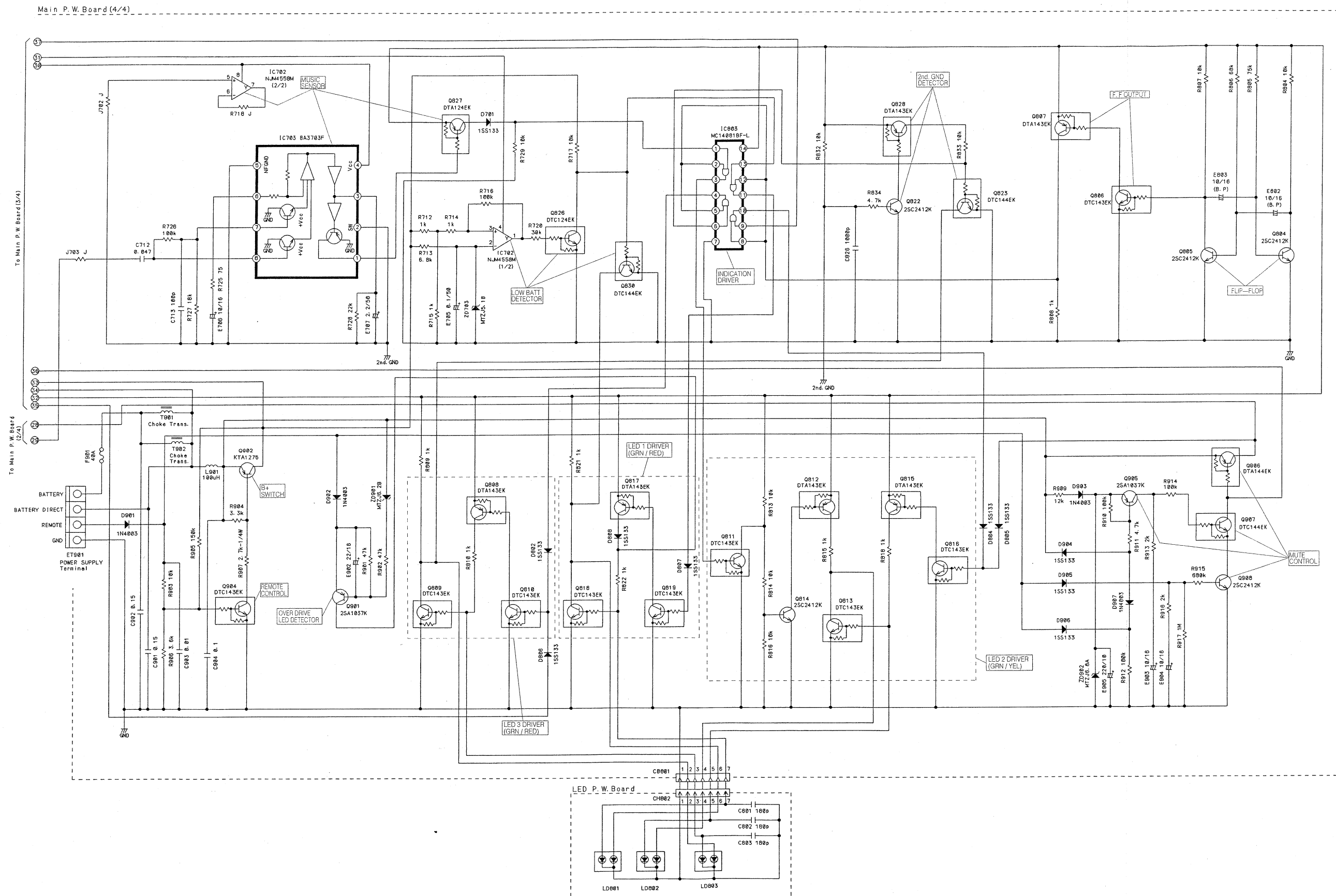
1

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4

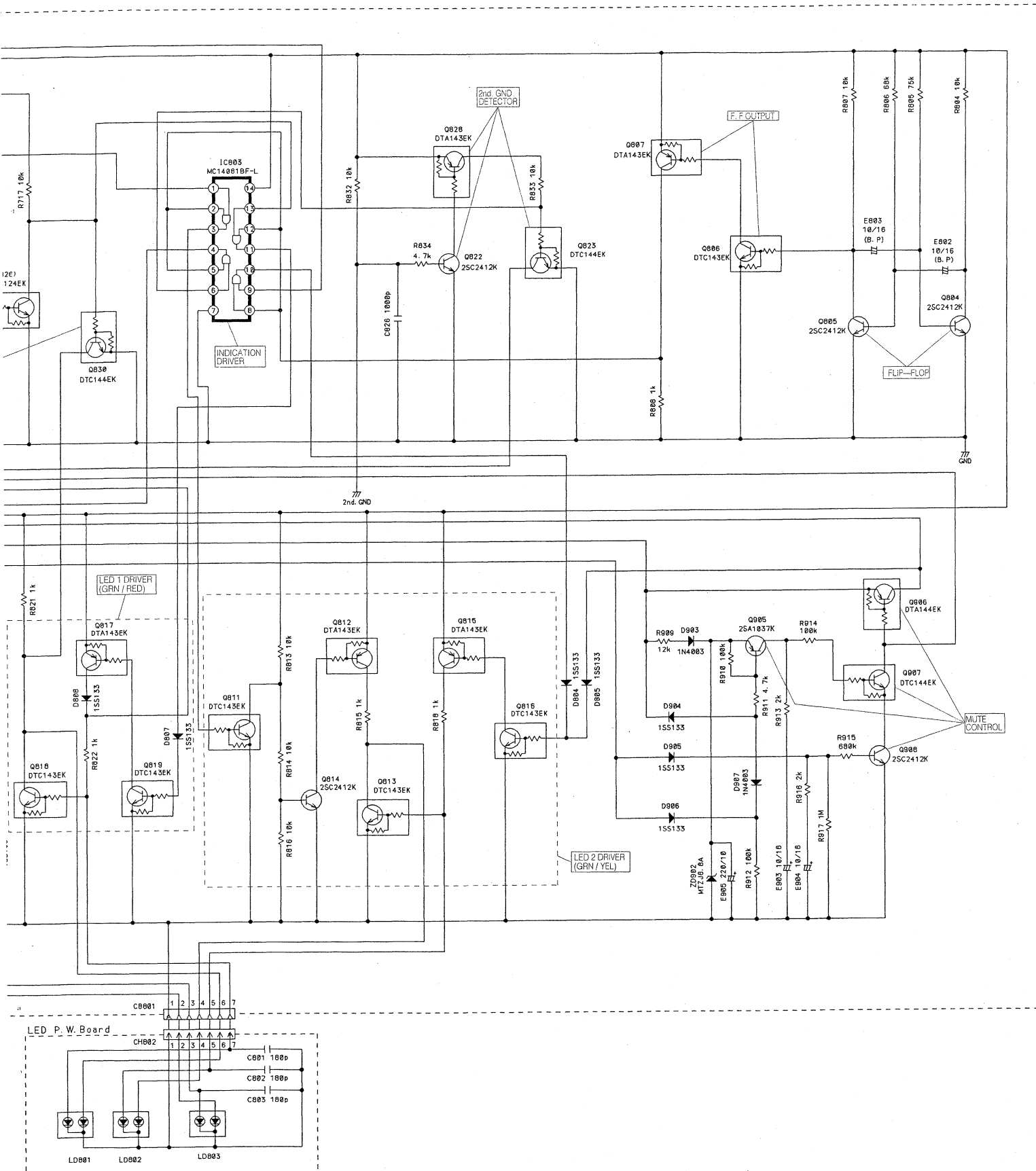
5



1
2
3
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7
8

Q80
Q80
Q80
Q80
Q80
Q81
Q81
Q81
Q81

- [Me
- Pc
- Me
- Me
- Me



IC702		IC703		IC803	
1	14.5V	1	15.1V	1	7mV
2	4.8V	2	0.7mV	9	4.6mV
3	7.24V	3	3.62V	10	1.8mV
4	-15V	4	15.2V	11	1.2mV
5	0.7mV	5	0.7mV	12	17mV
6	0.4mV	6	0.6V	13	8.1V
7	0.2mV	7	13mV	14	2mV
8	15.2V	8	225mV	7,8	1.2mV

	E	C	B		E	C	B		E	C	B
Q804	0V	8.1V	0V	Q814	2mV	23mV	0.64V	Q828	1.4mV	1.4mV	19mV
Q805	0V	8.1V	0V	Q815	8.1V	2mV	8.1V	Q830	2mV	1.96V	19mV
Q806	0V	0V	0V	Q816	2mV	8.1V	2mV	Q901	13.7V	2.3mV	13.7V
Q807	2mV	8.1V	0V	Q817	8.1V	16mV	8.1V	Q902	14.3V	13.6V	14.3V
Q808	8.1V	2mV	8.1V	Q818	2mV	1.96V	2mV	Q904	1.7mV	34mV	2.65V
Q809	2mV	1.96V	2mV	Q819	2mV	2mV	2mV	Q905	5.5V	7.9mV	6.4V
Q810	2mV	8.1V	73mV	Q822	1.4mV	8.1V	0.8mV	Q906	14.3V	-6.8V	14.2V
Q811	2mV	4.43V	2mV	Q823	2mV	1.96V	5mV	Q907	1.7mV	14.2V	7.7mV
Q812	8.1V	8.1V	23mV	Q826	2mV	19mV	14.5V	Q908	1.2mV	1.7mV	0.55V
Q813	2mV	2mV	2mV	Q827	15.1V	15.1V	1.2V				

[Measuring Conditions]

- Power Supply Voltage : DC14.4V
- Measuring Meter : Digital Multi Voltmeter
- Measuring Point Reference : Between Ground
- Measuring Conditions : No Signal Input

NOTE:
 1. All resistance values are in ohms. K = 1,000
 2. All capacitance values are in microfarads. P = 1/1,000,000

Electrical Parts List

Capacitor : μ F=microfarads,pF=picofarads

Abbreviations			Symbol No.	Part No.	Description
RES.= Resistor	CAP.= Capacitor		Q413	48E27752S01	TR,KSA992
C.F.= Carbon Film	ELY.= Electrolytic		Q414	48E27752S01	TR,KSA992
M.F.= Metal Film	CER.= Ceramic		Q415	48E27752S01	TR,KSA992
M.O.= Metal Oxide Film	MYL.= Mylar		Q416	48E27752S01	TR,KSA992
M.P.= Metal Plate	TAN.= Tantalum		Q417	48E09088S01	TR,KTC 3198-Y -RD
TR. = Transistor	POLY.= Polystyrol		Q418	48E09088S01	TR,KTC 3198-Y -RD
TRANS.= Transformer	PP. = Polypropylene		Q419	48E09088S01	TR,KTC 3198-Y -RD
CP. = Chip	PLT.= Polyethylene		Q420	48E09088S01	TR,KTC 3198-Y -RD
	PF. = Polyester Film		Q421	48E27753S01	TR,KSC 1845
			Q422	48E27753S01	TR,KSC 1845
Symbol No.	Part No.	Description			
Main P.W.Board					
IC's					
IC101	51T80136F04	IC, M5238FP	Q423	48E27753S01	TR,KSC 1845
IC102	51T80136F04	IC, M5238FP	Q424	48E27753S01	TR,KSC 1845
IC103	51T80136F04	IC, M5238FP	Q425	48E08329S01	TR,KSC 2682-Y
IC104	51T80136F04	IC, M5238FP	Q426	48E08329S01	TR,KSC 2682-Y
IC105	51E22130S01	IC,NJM 4560M-TE3	Q427	48E08329S01	TR,KSC 2682-Y
IC201	51E22130S01	IC,NJM 4560M-TE3	Q428	48E08329S01	TR,KSC 2682-Y
IC202	51E22130S01	IC,NJM 4560M-TE3	Q429	48E10027S01	TR,KSC 2690A-Y
IC203	51E22130S01	IC,NJM 4560M-TE3	Q430	48E10027S01	TR,KSC 2690A-Y
IC204	51E22130S01	IC,NJM 4560M-TE3	Q431	48E10027S01	TR,KSC 2690A-Y
IC205	51E22130S01	IC,NJM 4560M-TE3	Q432	48E10027S01	TR,KSC 2690A-Y
IC206	51E22130S01	IC,NJM 4560M-TE3	Q433	48E05943S01	TR,KSA 1220A-Y
IC207	51E22130S01	IC,NJM 4560M-TE3	Q434	48E05943S01	TR,KSA 1220A-Y
IC208	51E22130S01	IC,NJM 4560M-TE3	Q435	48E05943S01	TR,KSA 1220A-Y
IC301	51T80136F04	IC, M5238FP	Q436	48E05943S01	TR,KSA 1220A-Y
IC302	51T80136F04	IC, M5238FP	Q437	48E29545S01	TR,KTC 3911-GR-CP
IC701	51E27890S01	IC,UPC494GS	Q438	48E29545S01	TR,KTC 3911-GR-CP
IC702	51E20551S01	IC,NJM 4558M-TE3	Q439	48E29545S01	TR,KTC 3911-GR-CP
IC703	51E29513S01	BA3703F	Q440	48E29545S01	TR,KTC 3911-GR-CP
IC803	51T25386Y01	MC14081BF-L	Q441	48E29545S01	TR,KTC 3911-GR-CP
			Q442	48E29545S01	TR,KTC 3911-GR-CP
			Q443	48E29545S01	TR,KTC 3911-GR-CP
			Q444	48E29545S01	TR,KTC 3911-GR-CP
			Q445	48T25535Y01	FET,IRF 540N
			Q446	48T25535Y01	FET,IRF 540N
			Q447	48T25535Y01	FET,IRF 540N
			Q448	48T25535Y01	FET,IRF 540N
			Q449	48T25536Y01	FET,IRF 9540N
			Q450	48T25536Y01	FET,IRF 9540N
			Q451	48T25536Y01	FET,IRF 9540N
			Q452	48T25536Y01	FET,IRF 9540N
			Q453	48E08335S01	TR,KTC 2878-B -RD
			Q454	48E08335S01	TR,KTC 2878-B -RD
			Q455	48E08335S01	TR,KTC 2878-B -RD
			Q456	48E08335S01	TR,KTC 2878-B -RD
			Q601	48E29536S01	FET,IRFZ 44N
			Q602	48E29536S01	FET,IRFZ 44N
Transistors/FET's					
Q401	48T61719F01	FET,TKR 2SK 389BL			
Q402	48T61719F01	FET,TKR 2SK 389BL			
Q403	48T61719F01	FET,TKR 2SK 389BL			
Q404	48T61719F01	FET,TKR 2SK 389BL			
Q405	48E09036S02	TR,KTA 1266-Y -RD			
Q406	48E09036S02	TR,KTA 1266-Y -RD			
Q407	48E09036S02	TR,KTA 1266-Y -RD			
Q408	48E09036S02	TR,KTA 1266-Y -RD			
Q409	48E09036S02	TR,KTA 1266-Y -RD			
Q410	48E09036S02	TR,KTA 1266-Y -RD			
Q411	48E09036S02	TR,KTA 1266-Y -RD			
Q412	48E09036S02	TR,KTA 1266-Y -RD			

Symbol No.	Part No.	Description
Q603	48E29536S01	FET,IRFZ 44N
Q604	48E29536S01	FET,IRFZ 44N
Q605	48E29536S01	FET,IRFZ 44N
Q606	48E29536S01	FET,IRFZ 44N
Q607	48E10027S01	TR,KSC 2690A-Y
Q608	48E05943S01	TR,KSA 1220A-Y
Q609	48E10027S01	TR,KSC 2690A-Y
Q610	48E05943S01	TR,KSA 1220A-Y
Q701	48E23701S01	TR,KTC 3228-O -RD
Q801	48E22902S01	TR,2SC2412K-Q,R,S-T146-CP
Q802	48E22902S01	TR,2SC2412K-Q,R,S-T146-CP
Q803	48E22900S01	TR,2SA1037K-Q,R,S-CP
Q804	48E22902S01	TR,2SC2412K-Q,R,S-T146-CP
Q805	48E22902S01	TR,2SC2412K-Q,R,S-T146-CP
Q806	48E22903S01	TR,DTC143EK-T-146-CP
Q807	48E23890S01	TR,DTA143EK-T-146-CP
Q808	48E23890S01	TR,DTA143EK-T-146-CP
Q809	48E22903S01	TR,DTC143EK-T-146-CP
Q810	48E22903S01	TR,DTC143EK-T-146-CP
Q811	48E22903S01	TR,DTC143EK-T-146-CP
Q812	48E23890S01	TR,DTA143EK-T-146-CP
Q813	48E22903S01	TR,DTC143EK-T-146-CP
Q814	48E22902S01	TR,2SC2412K-Q,R,S-T146-CP
Q815	48E23890S01	TR,DTA143EK-T-146-CP
Q816	48E22903S01	TR,DTC143EK-T-146-CP
Q817	48E23890S01	TR,DTA143EK-T-146-CP
Q818	48E22903S01	TR,DTC143EK-T-146-CP
Q819	48E22903S01	TR,DTC143EK-T-146-CP
Q820	48E22900S01	TR,2SA1037K-Q,R,S-CP
Q821	48E22900S01	TR,2SA1037K-Q,R,S-CP
Q822	48E22902S01	TR,2SC2412K-Q,R,S-T146-CP
Q823	48E22555S01	TR,DTC144EK-T-146-CP
Q824	48E22902S01	TR,2SC2412K-Q,R,S-T146-CP
Q825	48E22900S01	TR,2SA1037K-Q,R,S-CP
Q826	48E10426S01	TR,DTC124EK-T-146-CP
Q827	48E22092S01	TR,DTA124EK-T-146-CP
Q828	48E23890S01	TR,DTA143EK-T-146-CP
Q829	48E22902S01	TR,2SC2412K-Q,R,S-T146-CP
Q830	48E22555S01	TR,DTC144EK-T-146-CP
Q901	48E22900S01	TR,2SA1037K-Q,R,S-CP
Q902	48E23700S01	TR,KTA 1275-O -RD
Q904	48E22903S01	TR,DTC143EK-T-146-CP
Q905	48E22900S01	TR,2SA1037K-Q,R,S-CP
Q906	48E23697S01	TR,DTA144EK-T-146-CP
Q907	48E22555S01	TR,DTC144EK-T-146-CP
Q908	48E22902S01	TR,2SC2412K-Q,R,S-T146-CP

Symbol No.	Part No.	Description
Diodes		
D401	48E22916S01	DIO,1SS133-T-77 -AX
D402	48E22916S01	DIO,1SS133-T-77 -AX
D403	48E22916S01	DIO,1SS133-T-77 -AX
D404	48E22916S01	DIO,1SS133-T-77 -AX
D601	48E25517S01	DIO,11EFS2
D602	48E25517S01	DIO,11EFS2
D603	48E25517S01	DIO,11EFS2
D604	48E25517S01	DIO,11EFS2
D605	48T65059W01	DIO,REC F10P20F
D606	48T65059W02	DIO,REC F10P20FR
D614	48E23703S01	DIO,1N 4003 -AX
D701	48E22916S01	DIO,1SS133-T-77 -AX
D801	48E22916S01	DIO,1SS133-T-77 -AX
D802	48E22916S01	DIO,1SS133-T-77 -AX
D804	48E22916S01	DIO,1SS133-T-77 -AX
D805	48E22916S01	DIO,1SS133-T-77 -AX
D806	48E22916S01	DIO,1SS133-T-77 -AX
D807	48E22916S01	DIO,1SS133-T-77 -AX
D808	48E22916S01	DIO,1SS133-T-77 -AX
D809	48E22916S01	DIO,1SS133-T-77 -AX
D810	48E22916S01	DIO,1SS133-T-77 -AX
D901	48E23703S01	DIO,1N 4003 -AX
D902	48E23703S01	DIO,1N 4003 -AX
D903	48E23703S01	DIO,1N 4003 -AX
D904	48E22916S01	DIO,1SS133-T-77 -AX
D905	48E22916S01	DIO,1SS133-T-77 -AX
D906	48E22916S01	DIO,1SS133-T-77 -AX
D907	48E23703S01	DIO,1N 4003 -AX
ZD401	48T25801W01	DIO,ZEN,HZS 2ALL-R5
ZD402	48T25801W01	DIO,ZEN,HZS 2ALL-R5
ZD403	48T25801W01	DIO,ZEN,HZS 2ALL-R5
ZD404	48T25801W01	DIO,ZEN,HZS 2ALL-R5
ZD601	48E08332S01	DIO,ZEN,MTZJ22B -AX
ZD602	48E26241S01	DIO,ZEN,MTZJ13B-AX
ZD603	48E26241S01	DIO,ZEN,MTZJ13B-AX
ZD604	48E08332S01	DIO,ZEN,MTZJ22B -AX
ZD605	48E22436S01	DIO,ZEN,MTZJ16B -AX
ZD606	48E22436S01	DIO,ZEN,MTZJ16B -AX
ZD701	48E08332S01	DIO,ZEN,MTZJ22B -AX
ZD702	48E22162S01	DIO,ZEN,MTZJ9.1B-AX
ZD703	48E22944S01	DIO,ZEN,MTZJ5.1B-AX
ZD801	48E08332S01	DIO,ZEN,MTZJ22B -AX
ZD901	48E29521S01	DIO,ZEN,MTZJ6.2B-AX
ZD902	48E22917S01	DIO,ZEN,MTZJ6.8A-AX

Symbol No.	Part No.	Description	Symbol No.	Part No.	Description
Switches					
SW101	40E20895S01	S/W,SSAF123NA (INPUT CHANNEL)	C111	08E20072S01	CAP,CER,100-J-CH -AX
SW102	40T94668F06	S/W,SSSF142 (DIRECT MODE)	C112	08E20072S01	CAP,CER,100-J-CH -AX
SW201	40T94668F06	S/W,SSSF142 (HP (X1/X20))	C117	21E06806S02	CAP,CER,330-J-SL -AX
SW202	40E23679S01	S/W,SSAF122NA (HP)	C118	21E06806S02	CAP,CER,330-J-SL -AX
SW203	40E23679S01	S/W,SSAF122NA (HP)	C201	08E29546S01	CAP,TF,392-J -RD
SW204	40T94668F06	S/W,SSSF142 (LP (X1/X20))	C202	08E29546S01	CAP,TF,392-J -RD
SW205	40E23679S01	S/W,SSAF122NA (LP)	C203	08E29546S01	CAP,TF,392-J -RD
SW206	40E23679S01	S/W,SSAF122NA (LP)	C204	08E29546S01	CAP,TF,392-J -RD
Coils			C205	08E22526S01	CAP,TF,823-J -RD
L601	24E25516S01	CHOKO COIL(10uH)	C206	08E22526S01	CAP,TF,823-J -RD
L602	24E25516S01	CHOKO COIL(10uH)	C207	08E22526S01	CAP,TF,823-J -RD
L603	25E20892S01	CHOKO COIL(38uH)	C208	08E22526S01	CAP,TF,823-J -RD
L604	25E20892S01	CHOKO COIL(38uH)	C209	08E22526S01	CAP,TF,823-J -RD
L901	24E29518S01	CHOKO COIL(100uH)	C210	08E22526S01	CAP,TF,823-J -RD
Transformers			C211	08E22526S01	CAP,TF,823-J -RD
T601	25E29537S01	ASSY POWER TRANS	C212	08E22526S01	CAP,TF,823-J -RD
T901	25E29538S01	CHOKO TRANS 35m/m	C213	08E20072S01	CAP,CER,100-J-CH -AX
T902	25E29538S01	CHOKO TRANS 35m/m	C214	08E20072S01	CAP,CER,100-J-CH -AX
Thermistors			C215	08E20072S01	CAP,CER,100-J-CH -AX
TH701	48E20887S01	TH,YTD5-320(20K)-YEL	C216	08E20072S01	CAP,CER,100-J-CH -AX
TH801	48E20887S01	TH,YTD5-320(20K)-YEL	C217	08E22939S01	CAP,TF,184-J -RD
Photo Coupler			C218	08E22939S01	CAP,TF,184-J -RD
PT701	48E25501S01	PS2501-1(L)	C219	08E22939S01	CAP,TF,184-J -RD
Capacitors			C220	08E22939S01	CAP,TF,184-J -RD
C101	08E20072S01	CAP,CER,100-J-CH -AX	C221	08E22939S01	CAP,TF,184-J -RD
C102	08E20072S01	CAP,CER,100-J-CH -AX	C222	08E22939S01	CAP,TF,184-J -RD
C103	08E20072S01	CAP,CER,100-J-CH -AX	C223	08E22939S01	CAP,TF,184-J -RD
C104	08E20072S01	CAP,CER,100-J-CH -AX	C224	08E22939S01	CAP,TF,184-J -RD
C105	21E06806S02	CAP,CER,330-J-SL -AX	C229	08E22526S01	CAP,TF,823-J -RD
C106	21E06806S02	CAP,CER,330-J-SL -AX	C230	08E22526S01	CAP,TF,823-J -RD
C107	21E06806S02	CAP,CER,330-J-SL -AX	C231	08E22526S01	CAP,TF,823-J -RD
C108	21E06806S02	CAP,CER,330-J-SL -AX	C232	08E22526S01	CAP,TF,823-J -RD
C109	08E20072S01	CAP,CER,100-J-CH -AX	C233	08E29546S01	CAP,TF,392-J -RD
C110	08E20072S01	CAP,CER,100-J-CH -AX	C234	08E29546S01	CAP,TF,392-J -RD
			C235	08E22937S01	CAP,TF,393-J -RD
			C236	08E22937S01	CAP,TF,393-J -RD
			C237	08E22937S01	CAP,TF,393-J -RD
			C238	08E22937S01	CAP,TF,393-J -RD
			C239	08E20992S01	CAP,TF,222-J -RD
			C240	08E20992S01	CAP,TF,222-J -RD
			C301	08E20072S01	CAP,CER,100-J-CH -AX
			C302	08E20072S01	CAP,CER,100-J-CH -AX
			C303	08E29554S01	CAP,CER,5R6-K-SL -AX
			C304	08E29554S01	CAP,CER,5R6-K-SL -AX
			C305	21E06806S02	CAP,CER,330-J-SL -AX
			C306	21E06806S02	CAP,CER,330-J-SL -AX
			C401	08E08423S07	CAP,CER,221-J-CP 50V
			C402	08E08423S07	CAP,CER,221-J-CP 50V
			C403	08E08423S07	CAP,CER,221-J-CP 50V

Symbol No.	Part No.	Description	Symbol No.	Part No.	Description
C404	08E08423S07	CAP,CER,221-J-CP 50V	C702	08E22435S01	CAP,TF,104-J -RD
C405	08E22081S01	CAP,CER,102-J-CP 50V	C703	08E25318S01	CAP,TF,152-J -RD
C406	08E22081S01	CAP,CER,102-J-CP 50V	C704	08E23699S01	CAP,TF,224-J -RD
C407	08E22081S01	CAP,CER,102-J-CP 50V	C712	08E22938S01	CAP,TF,473-J -RD
C408	08E22081S01	CAP,CER,102-J-CP 50V	C713	08E22899S01	CAP,CER,101-J-CP 50V
C409	08E22077S01	CAP,CER,470-J-CP 50V	C804	08E22081S01	CAP,CER,102-J-CP 50V
C410	08E22077S01	CAP,CER,470-J-CP 50V	C806	08E22969S01	CAP,TF,103-J -RD
C411	08E22077S01	CAP,CER,470-J-CP 50V	C826	08E10252S01	CAP,CER,102-J-CP 50V
C412	08E22077S01	CAP,CER,470-J-CP 50V	C901	08E20756S01	CAP,TF,154-J -RD
C413	08E08423S03	CAP,CER,100-D-CP 50V	C902	08E20756S01	CAP,TF,154-J -RD
C414	08E08423S03	CAP,CER,100-D-CP 50V	C903	08E22969S01	CAP,TF,103-J -RD
C415	08E08423S03	CAP,CER,100-D-CP 50V	C904	08E22435S01	CAP,TF,104-J -RD
C416	08E08423S03	CAP,CER,100-D-CP 50V	E101	23T45174W06	CAP,SME 22R-1C-BP
C417	08E22969S01	CAP,TF,103-J -RD	E102	23T45174W06	CAP,SME 22R-1C-BP
C418	08E22969S01	CAP,TF,103-J -RD	E103	23T45174W06	CAP,SME 22R-1C-BP
C419	08E22969S01	CAP,TF,103-J -RD	E104	23T45174W06	CAP,SME 22R-1C-BP
C420	08E22969S01	CAP,TF,103-J -RD	E109	23E08383S08	CAP,ELEC,10/16 -RD
C421	08E25510S01	CAP,CER,151-J-CP 50V	E110	23E08383S08	CAP,ELEC,10/16 -RD
C422	08E25510S01	CAP,CER,151-J-CP 50V	E201	23T45174W06	CAP,SME 22R-1C-BP
C423	08E25510S01	CAP,CER,151-J-CP 50V	E202	23T45174W06	CAP,SME 22R-1C-BP
C424	08E25510S01	CAP,CER,151-J-CP 50V	E203	23T45174W06	CAP,SME 22R-1C-BP
C425	08E25510S01	CAP,CER,151-J-CP 50V	E204	23T45174W06	CAP,SME 22R-1C-BP
C426	08E25510S01	CAP,CER,151-J-CP 50V	E205	23T45174W17	CAP,SME 2R2-1H-BP-R5
C427	08E25510S01	CAP,CER,151-J-CP 50V	E206	23T45174W17	CAP,SME 2R2-1H-BP-R5
C428	08E25510S01	CAP,CER,151-J-CP 50V	E207	23T45174W17	CAP,SME 2R2-1H-BP-R5
C429	08E25510S01	CAP,CER,151-J-CP 50V	E208	23T45174W17	CAP,SME 2R2-1H-BP-R5
C430	08E25510S01	CAP,CER,151-J-CP 50V	E301	23T45174W06	CAP,SME 22R-1C-BP
C431	08E25510S01	CAP,CER,151-J-CP 50V	E302	23T45174W06	CAP,SME 22R-1C-BP
C432	08E25510S01	CAP,CER,151-J-CP 50V	E303	23T45174W06	CAP,SME 22R-1C-BP
C433	08E25510S01	CAP,CER,151-J-CP 50V	E304	23T45174W06	CAP,SME 22R-1C-BP
C434	08E25510S01	CAP,CER,151-J-CP 50V	E401	23T45174W19	CAP,SME 4R7-1H-BP
C435	08E25510S01	CAP,CER,151-J-CP 50V	E402	23T45174W19	CAP,SME 4R7-1H-BP
C436	08E25510S01	CAP,CER,151-J-CP 50V	E403	23T45174W19	CAP,SME 4R7-1H-BP
C437	08E22938S01	CAP,TF,473-J -RD	E404	23T45174W19	CAP,SME 4R7-1H-BP
C438	08E22938S01	CAP,TF,473-J -RD	E405	23T00180L28	CAP,NS1 47R-1H
C439	08E22938S01	CAP,TF,473-J -RD	E406	23T00180L28	CAP,NS1 47R-1H
C440	08E22938S01	CAP,TF,473-J -RD	E407	23T00180L28	CAP,NS1 47R-1H
C601	08E22936S01	CAP,TF,223-J -RD	E408	23T00180L28	CAP,NS1 47R-1H
C602	08E22936S01	CAP,TF,223-J -RD	E409	23T00180L28	CAP,NS1 47R-1H
C603	08E22938S01	CAP,TF,473-J -RD	E410	23T00180L28	CAP,NS1 47R-1H
C604	08E22938S01	CAP,TF,473-J -RD	E411	23T00180L28	CAP,NS1 47R-1H
C605	08E22938S01	CAP,TF,473-J -RD	E412	23T00180L28	CAP,NS1 47R-1H
C606	08E22938S01	CAP,TF,473-J -RD	E413	23T45174W01	CAP,SME 331-0J-BP
C607	08E22524S01	CAP,TF,563-J -RD	E414	23T45174W01	CAP,SME 331-0J-BP
C608	08E22524S01	CAP,TF,563-J -RD	E415	23T45174W01	CAP,SME 331-0J-BP
C609	08E22524S01	CAP,TF,563-J -RD	E416	23T45174W01	CAP,SME 331-0J-BP
C610	08E22524S01	CAP,TF,563-J -RD	E417	23T45102W22	CAP,NS1 2R2-1H
C622	08E20756S01	CAP,TF,154-J -RD	E418	23T45102W22	CAP,NS1 2R2-1H
C701	08E22435S01	CAP,TF,104-J -RD	E419	23T45102W22	CAP,NS1 2R2-1H

Symbol No.	Part No.	Description	Symbol No.	Part No.	Description
E420	23T45102W22	CAP,NS1 2R2-1H	R108	---	RES,CF,223-J-1/8 -AX
E601	23T25139Y01	CAP,PW 392 1C	R109	---	RES,CF,751-J-1/8 -AX
E602	23T25139Y01	CAP,PW 392 1C	R110	---	RES,CF,751-J-1/8 -AX
E603	23E20911S01	CAP,ELEC,470/35 -RD	R111	---	RES,CF,751-J-1/8 -AX
E604	23E20911S01	CAP,ELEC,470/35 -RD	R112	---	RES,CF,751-J-1/8 -AX
E606	23E29535S01	CAP,ELEC,1000/50 M	R113	---	RES,CF,682-J-1/8 -AX
E607	23E29535S01	CAP,ELEC,1000/50 M	R114	---	RES,CF,682-J-1/8 -AX
E608	23T25273Y01	CAP,LPO 822 1V	R115	---	RES,CF,682-J-1/8 -AX
E609	23T25273Y01	CAP,LPO 822 1V	R116	---	RES,CF,682-J-1/8 -AX
E610	23T00180L26	CAP,NS1 22R-1H	R117	---	RES,CF,103-J-1/8 -AX
E611	23T00180L26	CAP,NS1 22R-1H	R118	---	RES,CF,103-J-1/8 -AX
E612	23T00180L26	CAP,NS1 22R-1H	R119	---	RES,CF,103-J-1/8 -AX
E613	23T00180L26	CAP,NS1 22R-1H	R120	---	RES,CF,103-J-1/8 -AX
E614	23T00149L63	CAP,SME 471-1H	R121	---	RES,CF,911-J-1/8 -AX
E615	23T00149L63	CAP,SME 471-1H	R122	---	RES,CF,911-J-1/8 -AX
E616	23T00180L14	CAP,NS1 101-1E	R123	---	RES,CF,911-J-1/8 -AX
E617	23T00180L14	CAP,NS1 101-1E	R124	---	RES,CF,911-J-1/8 -AX
E701	23T00180L26	CAP,NS1 22R-1H	R125	---	RES,CF,152-J-1/8 -AX
E702	23E10238S01	CAP,ELEC,100/16 -RD	R126	---	RES,CF,152-J-1/8 -AX
E703	23E20849S01	CAP,ELEC,100/10 -RD	R127	---	RES,CF,152-J-1/8 -AX
E704	23E20211S01	CAP,ELEC,330/16 -RD	R128	---	RES,CF,152-J-1/8 -AX
E705	23E08383S18	CAP,ELEC,0.1/50 -RD	R129	---	RES,CF,104-J-1/8 -AX
E706	23E08383S08	CAP,ELEC,10/16 -RD	R130	---	RES,CF,104-J-1/8 -AX
E707	23E22905S01	CAP,ELEC,2.2/50 -RD	R131	---	RES,CF,104-J-1/8 -AX
E801	23E11142S01	CAP,ELE,100/10-BP-RD	R132	---	RES,CF,104-J-1/8 -AX
E802	23E29495S01	CAP,ELE,10/16-BP-RD	R133	---	RES,CF,223-J-1/8 -AX
E803	23E29495S01	CAP,ELE,10/16-BP-RD	R134	---	RES,CF,223-J-1/8 -AX
E804	23E20211S01	CAP,ELEC,330/16 -RD	R135	---	RES,CF,101-J-1/8 -AX
E805	23E22158S01	CAP,ELEC,10/50 -RD	R136	---	RES,CF,101-J-1/8 -AX
E806	23E22158S01	CAP,ELEC,10/50 -RD	R137	---	RES,CF,273-J-1/8 -AX
E807	23E08383S08	CAP,ELEC,10/16 -RD	R138	---	RES,CF,273-J-1/8 -AX
E808	23E08383S18	CAP,ELEC,0.1/50 -RD	R139	---	RES,CF,751-J-1/8 -AX
E809	23E23848S01	CAP,ELEC,220/10 -RD	R140	---	RES,CF,751-J-1/8 -AX
E810	23E08383S16	CAP,ELEC,4.7/50 -RD	R141	---	RES,CF,105-J-1/8 -AX
E902	23E08383S13	CAP,ELEC,22/16 -RD	R142	---	RES,CF,105-J-1/8 -AX
E903	23E08383S08	CAP,ELEC,10/16 -RD	R143	---	RES,CF,103-J-1/8 -AX
E904	23E08383S08	CAP,ELEC,10/16 -RD	R144	---	RES,CF,103-J-1/8 -AX
E905	23E23848S01	CAP,ELEC,220/10 -RD	R145	---	RES,CF,103-J-1/8 -AX
			R146	---	RES,CF,103-J-1/8 -AX
			R201	---	RES,CF,362-J-1/8 -AX
Resistors			R202	---	RES,CF,362-J-1/8 -AX
R101	---	RES,CF,101-J-1/8 -AX	R203	---	RES,CF,362-J-1/8 -AX
R102	---	RES,CF,101-J-1/8 -AX	R204	---	RES,CF,362-J-1/8 -AX
R103	---	RES,CF,101-J-1/8 -AX	R205	---	RES,CF,682-J-1/8 -AX
R104	---	RES,CF,101-J-1/8 -AX	R206	---	RES,CF,682-J-1/8 -AX
R105	---	RES,CF,223-J-1/8 -AX	R207	---	RES,CF,682-J-1/8 -AX
R106	---	RES,CF,223-J-1/8 -AX	R208	---	RES,CF,682-J-1/8 -AX
R107	---	RES,CF,223-J-1/8 -AX	R209	---	RES,CF,103-J-1/8 -AX
			R210	---	RES,CF,103-J-1/8 -AX

Symbol No.	Part No.	Description	Symbol No.	Part No.	Description
R211	---	RES,CF,103-J-1/8 -AX	R316	---	RES,CF,433-J-1/8 -AX
R212	---	RES,CF,103-J-1/8 -AX	R317	---	RES,CF,752-J-1/8 -AX
R213	---	RES,CF,103-J-1/8 -AX	R318	---	RES,CF,433-J-1/8 -AX
R214	---	RES,CF,103-J-1/8 -AX	R401	---	RES,CF,102-J-1/8 -AX
R215	---	RES,CF,103-J-1/8 -AX	R402	---	RES,CF,102-J-1/8 -AX
R216	---	RES,CF,103-J-1/8 -AX	R403	---	RES,CF,102-J-1/8 -AX
R217	---	RES,CF,273-J-1/8 -AX	R404	---	RES,CF,102-J-1/8 -AX
R218	---	RES,CF,273-J-1/8 -AX	R405	---	RES,CF,103-J-1/8 -AX
R219	---	RES,CF,273-J-1/8 -AX	R406	---	RES,CF,103-J-1/8 -AX
R220	---	RES,CF,273-J-1/8 -AX	R407	---	RES,CF,103-J-1/8 -AX
R221	---	RES,CF,273-J-1/8 -AX	R408	---	RES,CF,103-J-1/8 -AX
R222	---	RES,CF,273-J-1/8 -AX	R409	---	RES,CF,102-J-1/8 -AX
R223	---	RES,CF,273-J-1/8 -AX	R410	---	RES,CF,102-J-1/8 -AX
R224	---	RES,CF,273-J-1/8 -AX	R411	---	RES,CF,102-J-1/8 -AX
R225	---	RES,CF,114-J-1/8 -AX	R412	---	RES,CF,102-J-1/8 -AX
R226	---	RES,CF,114-J-1/8 -AX	R413	---	RES,CF,103-J-1/8 -AX
R227	---	RES,CF,114-J-1/8 -AX	R414	---	RES,CF,103-J-1/8 -AX
R228	---	RES,CF,114-J-1/8 -AX	R415	---	RES,CF,103-J-1/8 -AX
R229	---	RES,CF,512-J-1/8 -AX	R416	---	RES,CF,103-J-1/8 -AX
R230	---	RES,CF,512-J-1/8 -AX	R417	---	RES,CF,563-J-1/8 -AX
R231	---	RES,CF,512-J-1/8 -AX	R418	---	RES,CF,563-J-1/8 -AX
R232	---	RES,CF,512-J-1/8 -AX	R419	---	RES,CF,563-J-1/8 -AX
R233	---	RES,CF,622-J-1/8 -AX	R420	---	RES,CF,563-J-1/8 -AX
R234	---	RES,CF,622-J-1/8 -AX	R421	---	RES,CF,121-J-1/8 -AX
R235	---	RES,CF,622-J-1/8 -AX	R422	---	RES,CF,121-J-1/8 -AX
R236	---	RES,CF,622-J-1/8 -AX	R423	---	RES,CF,121-J-1/8 -AX
R237	---	RES,CF,622-J-1/8 -AX	R424	---	RES,CF,121-J-1/8 -AX
R238	---	RES,CF,622-J-1/8 -AX	R425	---	RES,CF,121-J-1/8 -AX
R239	---	RES,CF,622-J-1/8 -AX	R426	---	RES,CF,121-J-1/8 -AX
R240	---	RES,CF,622-J-1/8 -AX	R427	---	RES,CF,121-J-1/8 -AX
R241	---	RES,CF,103-J-1/8 -AX	R428	---	RES,CF,121-J-1/8 -AX
R242	---	RES,CF,103-J-1/8 -AX	R429	---	RES,CF,471-J-1/8 -AX
R243	---	RES,CF,103-J-1/8 -AX	R430	---	RES,CF,471-J-1/8 -AX
R244	---	RES,CF,103-J-1/8 -AX	R431	---	RES,CF,471-J-1/8 -AX
R301	---	RES,CF,153-J-1/8 -AX	R432	---	RES,CF,471-J-1/8 -AX
R302	---	RES,CF,153-J-1/8 -AX	R433	---	RES,CF,471-J-1/8 -AX
R303	---	RES,CF,153-J-1/8 -AX	R434	---	RES,CF,471-J-1/8 -AX
R304	---	RES,CF,153-J-1/8 -AX	R435	---	RES,CF,471-J-1/8 -AX
R305	---	RES,CF,512-J-1/8 -AX	R436	---	RES,CF,471-J-1/8 -AX
R306	---	RES,CF,512-J-1/8 -AX	R437	---	RES,CF,623-J-1/4 -AX
R307	---	RES,CF,512-J-1/8 -AX	R438	---	RES,CF,623-J-1/4 -AX
R308	---	RES,CF,512-J-1/8 -AX	R439	---	RES,CF,623-J-1/4 -AX
R309	---	RES,CF,303-J-1/8 -AX	R440	---	RES,CF,623-J-1/4 -AX
R310	---	RES,CF,303-J-1/8 -AX	R441	---	RES,CF,221-J-1/8 -AX
R311	---	RES,CF,303-J-1/8 -AX	R442	---	RES,CF,221-J-1/8 -AX
R312	---	RES,CF,303-J-1/8 -AX	R443	---	RES,CF,221-J-1/8 -AX
R313	---	RES,CF,183-J-1/8 -AX	R444	---	RES,CF,221-J-1/8 -AX
R314	---	RES,CF,183-J-1/8 -AX	R445	---	RES,CF,33R-J-1/8 -AX
R315	---	RES,CF,752-J-1/8 -AX	R446	---	RES,CF,33R-J-1/8 -AX

Symbol No.	Part No.	Description	Symbol No.	Part No.	Description
R447	—	RES,CF,33R-J-1/8 -AX	R496	—	RES,CF,182-J-1/8 -AX
R448	—	RES,CF,33R-J-1/8 -AX	R497	—	RES,CF,182-J-1/8 -AX
R449	—	RES,CF,222-J-1/8 -AX	R498	—	RES,CF,182-J-1/8 -AX
R450	—	RES,CF,222-J-1/8 -AX	R499	—	RES,CF,182-J-1/8 -AX
R451	—	RES,CF,222-J-1/8 -AX	R500	—	RES,CF,102-J-1/8 -AX
R452	—	RES,CF,222-J-1/8 -AX	R501	—	RES,CF,102-J-1/8 -AX
R453	—	RES,CF,243-J-1/8 -AX	R502	—	RES,CF,102-J-1/8 -AX
R454	—	RES,CF,243-J-1/8 -AX	R503	—	RES,CF,102-J-1/8 -AX
R455	—	RES,CF,243-J-1/8 -AX	R504	—	RES,CF,561-J-1/8 -AX
R456	—	RES,CF,243-J-1/8 -AX	R505	—	RES,CF,561-J-1/8 -AX
R457	—	RES,CF,622-J-1/8 -AX	R506	—	RES,CF,561-J-1/8 -AX
R458	—	RES,CF,622-J-1/8 -AX	R507	—	RES,CF,561-J-1/8 -AX
R459	—	RES,CF,622-J-1/8 -AX	R508	06E22058S01	RES,CF,123-J-1/10 -CP
R460	—	RES,CF,622-J-1/8 -AX	R509	06E22058S01	RES,CF,123-J-1/10 -CP
R461	—	RES,CF,102-J-1/8 -AX	R510	06E22058S01	RES,CF,123-J-1/10 -CP
R462	—	RES,CF,102-J-1/8 -AX	R511	06E22058S01	RES,CF,123-J-1/10 -CP
R463	—	RES,CF,102-J-1/8 -AX	R512	06E20907S01	RES,MO,1W 100E -RD
R464	—	RES,CF,102-J-1/8 -AX	R513	06E20907S01	RES,MO,1W 100E -RD
R465	06E29271S01	RES,CF,4R7-J-1/4 -CP	R514	06E20907S01	RES,MO,1W 100E -RD
R466	06E29271S01	RES,CF,4R7-J-1/4 -CP	R515	06E20907S01	RES,MO,1W 100E -RD
R467	06E29271S01	RES,CF,4R7-J-1/4 -CP	R516	06E22136S01	RES,MPR 5W 0.1X2
R468	06E29271S01	RES,CF,4R7-J-1/4 -CP	R517	06E22136S01	RES,MPR 5W 0.1X2
R469	06E29271S01	RES,CF,4R7-J-1/4 -CP	R518	06E22136S01	RES,MPR 5W 0.1X2
R470	06E29271S01	RES,CF,4R7-J-1/4 -CP	R519	06E22136S01	RES,MPR 5W 0.1X2
R471	06E29271S01	RES,CF,4R7-J-1/4 -CP	R520	06E29544S01	RES,CF,154-J-1/4 -CP
R472	06E29271S01	RES,CF,4R7-J-1/4 -CP	R521	—	RES,CF,331-J-1/8 -AX
R473	—	RES,CF,102-J-1/4 -AX	R522	—	RES,CF,331-J-1/8 -AX
R474	—	RES,CF,102-J-1/4 -AX	R523	—	RES,CF,331-J-1/8 -AX
R475	—	RES,CF,102-J-1/4 -AX	R524	—	RES,CF,331-J-1/8 -AX
R476	—	RES,CF,102-J-1/4 -AX	R601	06E22146S01	RES,MO,1W 111E -RD
R477	06E22954S01	RES,CF,68R-J-1/4 -CP	R602	06E22146S01	RES,MO,1W 111E -RD
R478	06E22954S01	RES,CF,68R-J-1/4 -CP	R603	06E20752S01	RES,CF,221-J-1/4 -CP
R479	06E22954S01	RES,CF,68R-J-1/4 -CP	R604	06E22548S01	RES,CF,471-J-1/4 -CP
R480	06E22954S01	RES,CF,68R-J-1/4 -CP	R605	06E22548S01	RES,CF,471-J-1/4 -CP
R481	06E22954S01	RES,CF,68R-J-1/4 -CP	R606	06E20752S01	RES,CF,221-J-1/4 -CP
R482	06E22954S01	RES,CF,68R-J-1/4 -CP	R607	06E20752S01	RES,CF,221-J-1/4 -CP
R483	06E22954S01	RES,CF,68R-J-1/4 -CP	R608	06E22548S01	RES,CF,471-J-1/4 -CP
R484	06E22954S01	RES,CF,68R-J-1/4 -CP	R609	06E22548S01	RES,CF,471-J-1/4 -CP
R485	06E29544S01	RES,CF,154-J-1/4 -CP	R610	06E20752S01	RES,CF,221-J-1/4 -CP
R486	06E29544S01	RES,CF,154-J-1/4 -CP	R611	06E20752S01	RES,CF,221-J-1/4 -CP
R487	06E29544S01	RES,CF,154-J-1/4 -CP	R612	06E22548S01	RES,CF,471-J-1/4 -CP
R488	06E29544S01	RES,CF,154-J-1/4 -CP	R613	06E22548S01	RES,CF,471-J-1/4 -CP
R489	06E29544S01	RES,CF,154-J-1/4 -CP	R614	06E20752S01	RES,CF,221-J-1/4 -CP
R490	06E29544S01	RES,CF,154-J-1/4 -CP	R615	06E20907S01	RES,MO,1W 100E -RD
R491	06E29544S01	RES,CF,154-J-1/4 -CP	R616	06E20907S01	RES,MO,1W 100E -RD
R492	—	RES,CF,101-J-1/8 -AX	R617	—	RES,CF,222-J-1/8 -AX
R493	—	RES,CF,101-J-1/8 -AX	R618	—	RES,CF,222-J-1/8 -AX
R494	—	RES,CF,101-J-1/8 -AX	R619	—	RES,CF,332-J-1/4 -AX
R495	—	RES,CF,101-J-1/8 -AX	R620	—	RES,CF,332-J-1/4 -AX

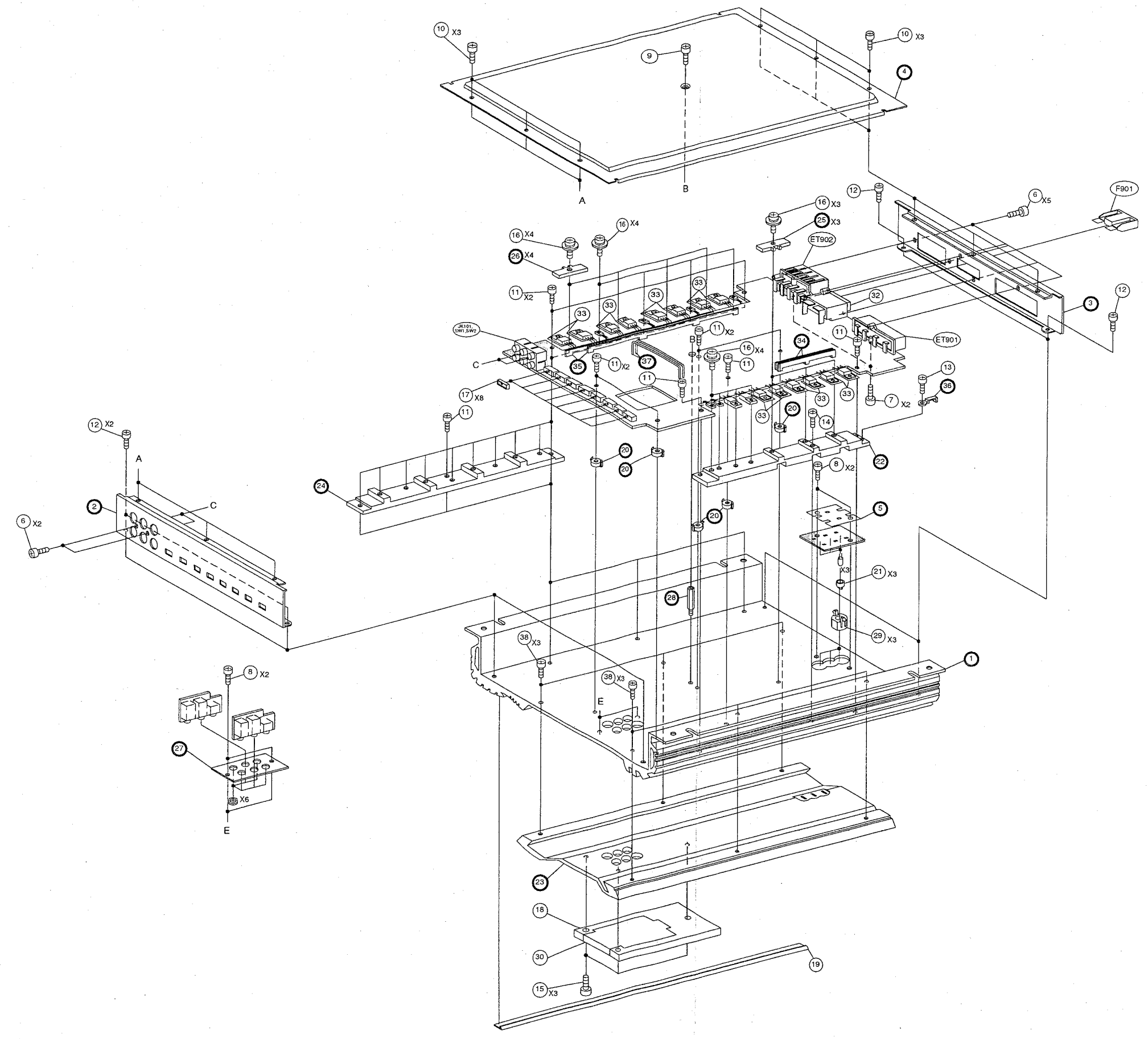
Symbol No.	Part No.	Description	Symbol No.	Part No.	Description
R634	06E22074S01	RES,CF,102-J-1/4 -CP	R832	06E20903S01	RES,CF,103-J-1/10 -CP
R701	06E22074S01	RES,CF,102-J-1/4 -CP	R833	06E20903S01	RES,CF,103-J-1/10 -CP
R702	06E23857S01	RES,CF,511-J-1/10 -CP	R834	06E22055S01	RES,CF,472-J-1/10 -CP
R703	06E22055S01	RES,CF,472-J-1/10 -CP	R835	06E22111S01	RES,CF,562-J-1/10 -CP
R704	06E20933S01	RES,MO,822-J-1/2W -AX	R836	06E22508S01	RES,CF,203-J-1/10 -CP
R705	06E22924S01	RES,CF,242-J-1/10-CP	R837	06E24356S01	RES,CF,181-J-1/10 -CP
R706	06E22112S01	RES,CF,113-J-1/10 -CP	R838	06E22060S01	RES,CF,223-J-1/10-CP
R707	06E22065S01	RES,CF,104-J-1/10 -CP	R839	06E20903S01	RES,CF,103-J-1/10 -CP
R708	06E224358S01	RES,CF,623-J-1/10-CP	R840	06E20903S01	RES,CF,103-J-1/10 -CP
R709	06E20903S01	RES,CF,103-J-1/10 -CP	R841	06E23692S01	RES,CF,514-J-1/10 -CP
R710	06E22059S01	RES,CF,183-J-1/10-CP	R842	06E23743S01	RES,CF,244-J-1/10 -CP
R711	06E22040S01	RES,CF,10R-J-1/10 -CP	R843	06E20903S01	RES,CF,103-J-1/10 -CP
R712	06E22048S01	RES,CF,102-J-1/10-CP	R844	06E20903S01	RES,CF,103-J-1/10 -CP
R713	06E22056S01	RES,CF,682-J-1/10 -CP	R845	06E20903S01	RES,CF,103-J-1/10 -CP
R714	06E22048S01	RES,CF,102-J-1/10-CP	R846	06E20903S01	RES,CF,103-J-1/10 -CP
R715	06E22048S01	RES,CF,102-J-1/10-CP	R847	06E20903S01	RES,CF,103-J-1/10 -CP
R716	06E22065S01	RES,CF,104-J-1/10 -CP	R848	06E20903S01	RES,CF,103-J-1/10 -CP
R717	06E20903S01	RES,CF,103-J-1/10 -CP	R849	06E20903S01	RES,CF,103-J-1/10 -CP
R718	—	RES,CF,0R0-J-1/10 -CP	R850	06E20903S01	RES,CF,103-J-1/10 -CP
R720	06E22953S01	RES,CF,303-J-1/10 -CP	R851	06E22067S01	RES,CF,474-J-1/10 -CP
R723	06E22060S01	RES,CF,223-J-1/10-CP	R852	06E22067S01	RES,CF,474-J-1/10 -CP
R725	06E26529S01	RES,CF,75R-J-1/10 -CP	R853	06E22068S01	RES,CF,105-J-1/10 -CP
R726	06E22065S01	RES,CF,104-J-1/10 -CP	R854	06E20903S01	RES,CF,103-J-1/10 -CP
R727	06E22059S01	RES,CF,183-J-1/10-CP	R855	06E20903S01	RES,CF,103-J-1/10 -CP
R729	06E20903S01	RES,CF,103-J-1/10 -CP	R857	06E22067S01	RES,CF,474-J-1/10 -CP
R801	06E22048S01	RES,CF,102-J-1/10-CP	R858	06E22067S01	RES,CF,474-J-1/10 -CP
R802	06E22048S01	RES,CF,102-J-1/10-CP	R859	06E22545S01	RES,CF,202-J-1/10 -CP
R803	06E22048S01	RES,CF,102-J-1/10-CP	R901	06E22062S01	RES,CF,473-J-1/10-CP
R804	06E20903S01	RES,CF,103-J-1/10 -CP	R902	06E22062S01	RES,CF,473-J-1/10-CP
R805	06E27611S01	RES,CF,753-J-1/10-CP	R903	06E20903S01	RES,CF,103-J-1/10 -CP
R806	06E22064S01	RES,CF,683-J-1/10-CP	R904	06E22053S01	RES,CF,332-J-1/10 -CP
R807	06E20903S01	RES,CF,103-J-1/10 -CP	R905	06E22509S01	RES,CF,154-J-1/10 -CP
R808	06E22048S01	RES,CF,102-J-1/10-CP	R906	06E22506S01	RES,CF,362-J-1/10 -CP
R809	06E22048S01	RES,CF,102-J-1/10-CP	R907	06E23694S01	RES,CF,272-J-1/4 -CP
R810	06E22048S01	RES,CF,102-J-1/10-CP	R909	06E22058S01	RES,CF,123-J-1/10 -CP
R813	06E20903S01	RES,CF,103-J-1/10 -CP	R910	06E22065S01	RES,CF,104-J-1/10 -CP
R814	06E20903S01	RES,CF,103-J-1/10 -CP	R911	06E22033S01	RES,CF,472-J-1/8 -CP
R815	06E22048S01	RES,CF,102-J-1/10-CP	R912	06E22065S01	RES,CF,104-J-1/10 -CP
R816	06E20903S01	RES,CF,103-J-1/10 -CP	R913	06E22545S01	RES,CF,202-J-1/10 -CP
R818	06E22048S01	RES,CF,102-J-1/10-CP	R914	06E22065S01	RES,CF,104-J-1/10 -CP
R821	06E22048S01	RES,CF,102-J-1/10-CP	R915	06E22547S01	RES,CF,684-J-1/10-CP
R822	06E22048S01	RES,CF,102-J-1/10-CP	R916	06E22545S01	RES,CF,202-J-1/10 -CP
R825	06E22053S01	RES,CF,332-J-1/10 -CP	R917	06E22068S01	RES,CF,105-J-1/10 -CP
R826	06E22030S01	RES,CF,102-J-1/8 -CP	VR401	18E25512S01	VR, EVNDJAA03 B1.5K-RD
R827	06E22053S01	RES,CF,332-J-1/10 -CP	VR402	18E25512S01	VR, EVNDJAA03 B1.5K-RD
R828	06E22030S01	RES,CF,102-J-1/8 -CP	VR403	18E25512S01	VR, EVNDJAA03 B1.5K-RD
R829	06E22545S01	RES,CF,202-J-1/10 -CP	VR404	18E25512S01	VR, EVNDJAA03 B1.5K-RD
R830	06E22065S01	RES,CF,104-J-1/10 -CP	VR701	18E20754S01	VR, EVN DJA A03 B10K-RD
R831	06E26014S01	RES,CF,103-J-1/8 -CP			

MEMO

Symbol No.	Part No.	Description	Symbol No.	Part No.	Description
Connectors			LED P.W.Board		
CB801	09E29461S01	CONN BASE, 53014-0710	LED's		
CH101	01E29543S01	ASS'Y CONN 4P	LD801	48E29454S01	LED, YLRG-304M-5.5(GRN/RED)
CH103	01E29543S01	ASS'Y CONN 4P	LD802	48E29455S01	LED, YLRG-304M-5.5(GRN/YEL)
CH201	01E29541S01	ASS'Y CONN 7P	LD803	48E29454S01	LED, YLRG-304M-5.5(GRN/RED)
CH203	01E29542S01	ASS'Y CONN 6P	Capacitors		
CH205	01E29541S01	ASS'Y CONN 7P	C801	08E22510S01	CAP,CER,181-J-CP 50V
CH207	01E29542S01	ASS'Y CONN 6P	C802	08E22510S01	CAP,CER,181-J-CP 50V
Volume (1) P.W.Board			C803	08E22510S01	CAP,CER,181-J-CP 50V
Resistors			Connector		
VR101	18E29471S01	VR, 50KAX2 (GAIN)	CH802	01E29540S01	7P CONNECTOR ASSY
VR201	18E29534S01	VR, 50KEX2, 20KEX2 (HP)	Miscellaneous		
VR203	18E29472S01	VR, 50KEX4 (LP)	ET901	29T25237Y01	POWER SUPPLY Terminal
Connectors			ET902	09E29255S01	SPEAKER OUTPUT Terminal
CB102	09E29477S01	CONN BASE, 53015-0410	F901	65E29539S01	Fuse, Auto 40A (For Battery Line)
CB202	09E29479S01	CONN BASE, 53015-0710	JK101	09T15353Y02	Jack, RCA INPUT/PRE OUT
CB204	09E29478S01	CONN BASE, 53015-0610	SW1		
Volume (2) P.W.Board			SW2		
Resistors					
VR102	18E29471S01	VR, 50KAX2 (GAIN)			
VR202	18E29534S01	VR, 50KEX2, 20KEX2 (HP)			
VR204	18E29472S01	VR, 50KEX4 (LP)			
Connectors					
CB104	09E29477S01	CONN BASE, 53015-0410			
CB206	09E29479S01	CONN BASE, 53015-0710			
CB208	09E29478S01	CONN BASE, 53015-0610			

Exploded View (Cabinet)

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Cabinet Assembly Parts List

NOTE: Parts without part number are not supplied.

Symbol No.	Index	Part No.	Description	Symbol No.	Index	Part No.	Description
6		03E09416S09	Screw, TPG-TPT (M3X10)				
7		03E09416S10	Screw, TPG-TPT (M3X8)				
8		03E24424S01	Screw, TPG-TPT (M2.6X5)				
9	1-D	03E29555S01	Screw, MCH (M3X8)				
10		03E09417S05	Screw, MCH-TPT (M2.6X5)				
11		03E09417S06	Screw, TPG-TPT (M3X11)				
12		03E09417S08	Screw, TPG-TPT (M3X5)				
13	2-F	03E20920S01	Screw, TPG-TPT (M3X5)				
14	3-E	03E29556S01	Screw, TPG-TPT (M3X14)				
15		02E29524S01	Wrench, Bolt (M2.6X14)				
16		03E20922S01	Screw, TPG-TPT (M3X11)				
17		15E11445S01	Cover, Switch				
18	5-D	64E29528S01	Badge, V12 (EXPERT)				
19	5-E	15E29557S01	Cover, Plate				
21		61E29351S01	Lens, LED				
29		15E29379S01	Holder, LED				
30	5-D	64E29532S01	Scale Plate				
32	2-E	09T95463W01	Fuse, Holder				
33		14E20977S01	Insulator, Sheet-A				
38		03E29348S01	Screw, TPG-TPT (M3X8)				